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International Paper Co. Increases Gross Sales

Consolidated Report of the Company and Its Subsidiaries Shows Sales of $79,758,774 for 1933, An Increase of $6,261,711 Over 1932—Loss After All Charges Including Depreciation and Depletion Is Cut to $4,430,528—Output Has Been Advancing for the Full Year with General Gain in Prices for Most Grades

Consolidated gross sales of the International Paper Company and subsidiaries in 1933 amounted to $79,758,774, an increase of $6,261,711 from 1932. The net loss after all charges, including depreciation and depletion, was $4,430,528. In addition, $1,865,080 was transferred to reserves to apply against an investment in the Newsprint Bond and Share Company, making a total reduction in surplus of $6,295,608. The deficit in 1932 was $9,591,253. The 1933 report includes $913,937 profit on bonds redeemed, against $642,985 in 1932.

At the end of 1933 current assets amounted to $41,808,374, including $3,395,514 cash and $23,075,952 inventories, comparing with $43,623,799, of which $3,018,486 was cash and $28,312,991 inventories, in 1932. Current liabilities were 22,845,816, including $16,040,062 notes payable, against $23,899,955, of which $18,348,166 were notes payable.

Consolidated notes payable were reduced by $2,308,104 and funded debt by $2,753,332. Of the notes payable, $1,000,000 was paid in February, 1934, and $1,000,000 more is scheduled for repayment next month. Unpaid cumulative dividends on preferred stocks from April 1, 1931, to the end of 1933 amounted to $18,801,948. There is $7,276,679 due to the International Paper and Power Company. Of the funded debt, $687,105 will mature in 1934.

"After further declines in sales of almost all grades of paper during the first quarter of 1933," Archibald R. Graustein, president, says in his report, "volumes of consumption started to increase. For the full year production of paper and pulp for sale totaled 1,516,334 tons, compared with 1,320,753 tons in 1932. Prices for most grades except newsprint—which declined $5 a ton effective April 1, 1933—have also shown a rising trend, although average pulp and paper price levels are still well below 1932."

Racquette River Makes Improvements

[FROM OUR REGULAR CORRESPONDENT]

POTSDAM, N. Y., April 16, 1934.—The Racquette River Paper Company has recently invested substantial sums in its power plants. This work is completed and improvements are now in progress at the mill. Two large cypress tub Dilts beaters are under construction and will be installed within the next month to give the additional beating capacity required in the manufacture of this company's high grade sulphite papers.

A most interesting line of sulphite specialties including water marked and decorative papers, and even a beautiful line of stationery, has been developed at this mill. The special colored, figured and embossed papers that have recently come into such popular use for holiday wrappings are made at the Racquette River mills and a great variety of artistic designs are included in the list of papers that this mill has recently perfected. A visit to their sample room is an interesting and enlightening experience.

With the installation of the new Dilts beaters the quality of their products will be further developed, and the Racquette River's sulphite papers will cover a wider field than heretofore.

These mills are long established. The names of Sisson and Racquette River have been prominent in the industry for many years, and they have ever been foremost in progress in the paper field. The personnel of the Racquette River Paper Company is impressive: George A. Sisson, Jr., a former president of the American Pulp and Paper Association, is president of the corporation. Rufus L. Sisson is treasurer, F. T. E. Sisson, general manager, John G. Murray, general superintendent and Arthur C. Smith, chief engineer.

Cancel Newsprint Hearing

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., April 16, 1934—The National Recovery Review Board of which Clarence Darrow is chairman has canceled a hearing which was to have been held on April 19 in connection with the newsprint paper code. No reason has been assigned for the cancellation.

According to the meagre information available the Irwin Paper Company and the Herald Whig, both of Quincy, Ill., filed protests with the Board against the freight zone as outlined in the trade practices of the newsprint code recommendations.

In other words the complaint was filed against a section of the newsprint code that has not yet been put into effect. It is understood that NRA officials explained this situation to the Board and that was the real reason for its cancellation.

Wisconsin Paper Mills Make Improvements

Mead Corp., of Chillicothe, Ohio, Starts Renovation of Strawboard Plant of Former Island Paper Co., at Menasha—Four-Story Addition at Appleton Woolen Mills Nearly Completed—Marathon Installs New Water Intake from Lake Superior at Ashland

[FROM OUR REGULAR CORRESPONDENT]

APPLETON, Wis., April 16, 1934—Renovation of the strawboard mill of the former Island Paper Company, Menasha, Wis., has been started by the Mead Corporation, Chillicothe, Ohio, which purchased the mill last year. Engineers of the company completed a survey of the property recently, have prepared plans for a general overhauling, and are on the ground at Menasha supervising the work.

No mechanical changes have been announced. An old wing used in the manufacture of sulphite is to be razed, and the grounds will be cleaned up. The machines will be overhauled and all the equipment and power plant placed in first class condition for operation.

It will take several weeks to complete the work and the date when operations will be started has not been decided. This mill has been down for several years and was last operated by Menasha Paper Mills Company.

With its large four-story addition now practically completed, Appleton Woolen Mills, Appleton, Wis., is razing its old frame warehouse built in 1886. Only a small amount of interior work remains to be done on the new unit. Manufacturing operations then will be expanded using some of the added space. A large part of the addition is in use for warehousing.

Installation of a new water intake from Lake Superior has been completed by Marathon Paper Mills Company at Ashland, Wis., according to B. H. Metternich, manager. The former intake was extended because of the erection of a pulp hoist contemplated this spring, and will remove the possibility of discoloration of water and clogging of the pipe by wood refuse. The city of Ashland paid $1,500 towards the cost of building the new intake, as an inducement for the new pulpwood importing operations.

TAPPI Holds Paper Machine Symposium

A symposium on paper machines featured the April meeting last week at Conway Hotel, Appleton, Wis., of the Lake States Section of the Technical Association of the Pulp and Paper Industry. Various phases of machine operation were presented in talks by the following: P. E. Jones, Patten Paper Company, Ltd.; E. A. Meyer, Badger Paper Mills, Inc.; H. D. Golladay, Consolidated Water Power and Paper Company; Fred Kranhold, Kimberly-Clark Corporation; Roy Kelly, Marathon Paper Mills Company, and M. J. Ketter, Hoberg Paper and Fibre Company. Motion pictures of west coast woods and mill operations were shown by G. S. Brazeau, of the Weyerhaeuser Timber Company.

Barge Shipping of Coal Resumed

Barge shipping of coal will be resumed by the Fox River Navigation Company to paper mills of the Fox River Valley on April 16, the official date of the opening of navigation for the season. Company workmen have been busy all winter repairing the tugs and barges, some of which have been rebuilt.

Sluicing of water through the dams has been curtailed in order to keep the level of Lake Winnebago high for seasonal storage. Most of the gates all along the Fox river were opened to prevent floods, but the waters have receded to about their normal level for this time of the year.

Some difficulty has been experienced by the mills because of the large amount of sediment washed into the river by heavy storms.

Plans for the dredging of lower Little Lake Butte des Morts at Menasha, Wis., to remove mill waste are being prepared by engineers. The fill from the dredging will be used to extend the shore line and alleviate an unsanitary condition which has been the source of complaint from property owners. Permission of the government must be secured before dredging will be started.

News of the Industry

Bergstrom Paper Company, Neenah, Wis., was presented with a plaque and certificate by the Employers Mutual Liability Insurance Company, Wausau, Wis., for having won high honors in a no-accident contest in which 1,160 industrial concerns were entered. The contest extended over a period of seven months from June to December, 1933, and those finishing withoutstanding no-accident records were given the awards.

Another improvement on the Fox River contemplated for next fall is the building of new locks on the government canal at DePere, Wis. The replacement is considered greatly needed, and with more modern facilities operation of shipping tugs will be improved.

Charles Sage, a director of the Kimberly-Clark Corporation, Neenah, Wis., has been elected vice-president of the Neenah club. This organization was founded twenty-five years ago largely by the paper manufacturers who make up the majority of its membership. The club has its own building. C. B. Clark, president of the Riverside Paper Corporation, was elected a director of the club for a term of two years.

Edward Zemlock, who has been in the engineering department of the Kimberly-Clark Corporation, Neenah, Wis., since 1925, has resigned. He is opening a grocery store at Waupaca, Wis. Members of the engineering department gave a farewell dinner last week on his behalf.

Cornelius Kokke, employed at the Kimberly-Clark Corporation's mill at Kimberly, Wis., won the election this spring as president of the village of Kimberly. He is 25 years old and is termed the "boy president" of the paper mill village. The new president worked on the 3 to 11 o'clock shift at the mill while completing his high school education and two years at Lawrence College.

H. C. Braeger, who was timber and pulpwood buyer for the Rhinelander Paper Company for fifteen years, died last week at his home at Rhinelander, Wis. He retired from active business life several years ago. Mr. Braeger was a former mayor of Rhinelander, and was 70 years old.

Peru Raises Duty on Paper Bags

A fifty per cent increase in the duty on paper bags has been authorized as an encouragement to Peruvian manufacturers, who have recently placed orders for American machinery. Imports of paper bags increased from 108,540 soles in value in 1930 to 161,383 soles in 1932. The United States in the latter year furnished 140,505 sole's worth.

Boston Paper Market Continues Fairly Active

Sentiment Continues Optimistic, Although Demand for Various Grades of Fine Paper Has Fallen Off Slightly—Kraft Wrapping Paper Sales Well Up to Average—Summer Specialties in Better Request—Paper Stock Section Practically Unchanged

[FROM OUR REGULAR CORRESPONDENT]

BOSTON, Mass., April 16, 1934—A fair volume of business persisted in the Boston paper market during last week. In fine paper lines, sales were "pretty good," but slowed up a bit. Salesmen contacting the printers found an easing off in the last ten days. Greeting card papers and fancy papers were more active. On the whole, a much better feeling which has prevailed for a few weeks, continued. In wrapping paper an average amount of sales took place. A little more activity developed in specialties, such as drinking cups, fiber plates, etc., for the summer resorts. A good summer resort business in New England usually follows a favorable season in Florida, which has been true of the last winter, hence dealers in specialties anticipate a substantial volume of orders. The box board market was moderately good, with prices holding firm. Filled news board was quotable at 45.00 @ 50.00, chip board at 42.50 @ 47.00, and chip board for creasing at 45.00.

Paper Stock Prices Unchanged

Practically the whole list of grades of paper stock remained unchanged in value. Although manufacturers did not cut prices, dealers intimated that it was difficult to secure orders. There is apparently a sufficient supply of stock in the hands of the mills for the present. Old papers, bagging, and old and new domestic rags appeared to be featureless, although declines in the price of two grades of roofing stock under old domestic rags took place. The No. 1 grade was marked down to 1.00 @ 1.05 from 1.20 @ 1.25, and the No. 2 grade to .75 @ .80 from .80. The foreign rag situation is about the same. It is almost impossible to buy foreign stock on account of the Exchange. Conditions tend to enhance the value of domestic stock. A dealer says that if business were good, with mills running full, the chances are that prices of domestic stock would advance considerably. At the present time, however, the domestic market seems to produce about enough to keep the mills in operation.

Protest Fletcher-Rayburn Bill

Several paper and cordage corporations of New England have entered formal protest at Washington against the recently revised Fletcher-Rayburn Bill. At a recent meeting called at the Boston Chamber of Commerce by President Eliot Wadsworth, representatives of some of the largest employers of labor in New England voted to oppose the proposed National Securities Exchange Act. The protest, which declares that "the operation of the proposed National Securities Exchange Act of 1934 would hinder recovery and handicap present forces making for increased and continuous employment" has been sent to the House and Senate committees studying the proposed act and to the Massachusetts representation in both branches of Congress. Among the firms that signed the protest are the following:

Among the Signers of the Protest

Andrews Paper Company, Annison Cordage Company, air & Bartlett Company, W. H. Claflin & Co., Inc., Hollingsworth & Vose Company, Plymouth Cordage Company, Samson Cordage Works, Storrs & Bement Company, Ward's, Samuel Ward Manufacturing Company, and Webster Thomas Company.

Waste Material Dealers Meet

The Boston Chapter of the American Paper Mill Supplies Institute met Monday evening, with President Harry Shuman in the chair. Secretary Folsom and Code Administrator Robert Graham discussed the outlook for the Supplementary Code. Nearly all members were pledged to operate on the code and two firms which had not done so agreed to apply code hours and wages immediately.

About forty mixed waste material dealers of Metropolitan Boston, principally from Roxbury, met recently for the purpose of organization. Ralph H. Cahouet, legal adviser for the NRA in Massachusetts, addressed the group, instructing them on legal phases of the Recovery Act. Code Administrator Graham and President Shuman, of the Boston Chapter of the American Paper Mills Supplies Institute, were present.

To Be New England Representative

T. K. Bradford, 10 High street, has been appointed New England representative for a container of Drymor Towels. The container is a package constituting a cabinet for paper towels, which can be fastened to the wall or carried from place to place. This box, classed among the first 100 out of 4,000 displayed at the Permanent Packaging Exhibition in New York, is made by the Fort Orange Paper Company, Castleton, N. Y., but designed by the Wheeler Paper Corporation, manufacturer of the towels, of Albany, N. Y. The package, a new product, which has been moving very successfully, is being offered at all leading department stores.

News of the Trade

Among the concerns which observed the Sixth Annual Art Week in Boston was the Japan Paper Company, which displayed paper and paper products.

A sales meeting of the Storrs & Bement Company was held at the office of the concern Saturday morning, with John H. Brewer, general manager, who gave a talk, presiding. Philip Richardson, manager of the announcement department, spoke in regard to the new announcement lines the firm has taken over—Linweave Haviland Plate Wedding, Linweave Continental Wedding and Wild Rose Wedding, made by the Linweave Association, Springfield, Mass.

Charles H. Dodge, 10 High street, has become New England representative of the American Wood Board Company, Schuylerville, N. Y., manufacturers of the Saratoga Program and Bill Tags and material for file folders.

Charles A. Esty, president and managing director of Carter Rice & Co. Corp., returned Friday from a three weeks trip to the Pacific Coast.

The office of the E. P. Lawson Company, machinery for paper and paper boxes, formerly on the third floor, is now in Room 234 at 170 Summer street. Law Williams is representative.

Daulton Visniski is now in charge of the office of the James Flett Organization, buyer of waste paper, at 16 Somerville avenue, Somerville, Mass.

Chicago Paper Market Shows Irregular Trend

Demand for Various Standard Grades of Fine Paper Slightly Less Active—Kraft Wrapping Paper Quiet, Although Specialties Are Moving in Good Volume—Paper Board Section Continues to Exhibit Strength—Quotations Fairly Well Maintained

[FROM OUR REGULAR CORRESPONDENT]

CHICAGO, Ill., April 16, 1934.—A slight decline in business volume was noted by Chicago paper executives during the past week. The see-saw action of the local market is reported as indicative of the trend for many weeks past. Observers within the industry itself state their belief that demand is not yet quite heavy enough to make for a steady production, a fact seemingly indicated by the variations in reports from week to week.

The paper industry, however, is giving a good account of itself in comparison with other lines of business. Specifically, the better grades of fine papers seem to be giving the best account of themselves. Books and covers, while reported slightly less active this week, have generally improved. The kraft market is not quite so active though some specialty goods are said to be moving in an improved fashion. Ground woods reported a lessening in production forces and some uncertainty due to conflicting reasons well known to the trade. The board market was fairly strong.

As far as prices are concerned the established position was fairly well maintained. Many feel that "chiseling" proclivities rather common in other industries working under code provisions are sufficiently few and far between in the local paper industry to indicate that the future as far as the code is concerned is indicative of genuine betterment.

W. J. Peacock to Address Safety Conference

W. J. Peacock, head of the personnel department of the Northern Paper Mills, Green Bay, Wis., is to be one of the speakers at the annual meeting of the Midwest Safety Conference to be held at the Sherman Hotel, Chicago, May 9 and 10. Mr. Peacock will talk the evening of May 9 on the subject "The Mishap Back of the Injury." The paper industry is expected to be well represented at the sessions on accident prevention. The two day conference will come to a climax with a banquet on the evening of May 10 at which time plaques will be awarded to the winners in the 10th semi-annual interplant accident prevention contest.

Paper Salesmen Plan Golf Schedule

Despite the fact that code discussions and the working out of the chosen program to collect information concerning code provisions are taking up much time, the Salesmens Association of the Paper Industry, Mid West Division, has found time to lay plans for the inauguration of its annual golf schedule. R. R. Cook, of the International Paper Company, is Bill Tilden's successor as golf chairman and has already announced the first event for May 25 at the Exmoor Country Club. The association will again sponsor five monthly events, winding up the season at the time of the Fall Meeting of the National Paper Trade Association with the big outing event which had its real inception at Olympia Fields a year ago.

News of the Trade

Caul & Ingalls, Inc., jobbers of wrapping paper, twine and containers, have leased for a term of years the first floor of the Otis Elevator Building, 1501 South Laflin street. The new location contains 30,000 square feet of floor space. Some idea of the steady growth of the well known Chicago concern is to be found in the statement that this is the fifth time in the last ten years that Caul & Ingalls have moved—each time doubling their floor space.

Announcement has been made that the name of the D. W. Dietrich Paper Company has been changed to the Everett Paper Company, and that the following officers have been elected: Henry A. Everett, Herman Paepcke Wilms, and J. Murray Washburn, Jr. Headquarters of the company are at 228 North La Salle street.

A list of manufacturing and service industries at Joliet, Ill., recently compiled by the Joliet Association of Commerce, bears out the statement that the Illinois city is really the wall paper center of the United States. Six wall paper manufacturers are located in Joliet as follows: Joliet Wall Paper Mills; Midwest Wall Paper Mills; Lennon Wall Paper Company; Star-Peerless Wall Paper Mills, Inc.; Superior Wall Paper Company, and the United Wall Paper Mills, Inc. The city also has two other paper concerns, the one, Prairie State Paper Mills, making paper toweling and light weight chip board, and the other, the National Carton Company, manufacturing folding boxes. The purpose of the listing is to increase local patronage of Joliet industries through providing information as to products made in that city.

The many stores of Horders, Inc., well known stationery supply house operating in the Chicago territory, are observing "Paper Week." Store windows have an attractive display of paper and paper products—an exhibit in line with the paper mill distributing record of the company itself. Office papers, mimeograph papers, envelopes, copy paper, bonds, manifolds, second sheets and all varieties of paper used in office work are given a splendid send-off. A sparkling and attention-getting bit of color is attained through each window display by the use of colored mimeo papers and office forms.

The end of next week will find a big vacancy on the eleventh floor of the Conway Building and a boom on space on the twenty-first floor of the "paper headquarters" at 111 West Washington street. By that time four well known companies will have their local offices at the latter location. The four are the Flambeau Paper Company, the Marathon Paper Company, Menasha Products Company, and the Tomahawk Paper Company. The new location will treble the floor space available, giving the four firms a total of 3,000 square feet of floor space in which to operate.

Another change in location reported is that of the Pillcher-Hamilton-Daily Company which this week got back into its old location at 340 North Dearborn street after an absence of nearly six years. The company moved its headquarters and stock rooms from 349 West Ontario street and now, in its own building, has available a great deal more space and opportunity for future expansion.

Code Assessment Basis Approved

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., April 18, 1934.—NRA approval has been given to a proposal to assess members of the Sanitary Napkin and Cleaning Tissue Industry for expenses of code administration on the basis of tonnage volume during the preceding calendar year.

Price Bros. Reorganization Plans Deadlocked

Thorough Probe Into Relationship of Chartered Banks of Canada to Collapse of Company to be Made by House of Commons Committee on Banking and Commerce—Prospects for Compromise Between Two Competing Groups Considered Fairly Bright

[FROM OUR REGULAR CORRESPONDENT]

MONTREAL, Que., April 16, 1934.—The House of Commons Committee on Banking and Commerce will undertake a thorough probe into the relationship of the chartered banks of Canada to the collapse and reorganization of Price Bros. & Co. This was announced at a sitting of the Committee in Ottawa after a letter from Lord Beaverbrook had been read into the records. Lord Beaverbrook's letter, which was addressed to the counsel for the Shareholders' Protective Committee, declared that "in no circumstances can the banks justify the refusal to pay the power bill which resulted in the collapse of Price Brothers." It was also stated by the London newspaper owner that "if the reorganization plan I submitted in 1933 had been accepted the company would be alive today." The letter was dated June 5, 1933.

It will possibly be a week hence before the Committee deals with the matter; indeed it may be even longer, as the member for Quebec South, Major C. G. Power, said he wanted to call Lord Beaverbrook, now in England, before the Committee, as well as Sir Herbert Holt (president of the Royal Bank of Canada), J. H. Gundy (Toronto), G. W. Beatty (president of the Canadian Pacific Railway) and others.

The pulp and paper inquiry will come under clause 6 of the resolution moved in the committee by Major Power which reads:

"The relationship between the banks or any of them and the pulp and paper industry, and the extent to which uncontrolled extension of credit brought about over capitalization and over expansion, and the subsequent disorganization and near bankruptcy of an industry dealing in some of the most valuable of our natural resources."

Meanwhile, with the return to Canada of the financial representative of Bowater's Paper Mills, the Price Brothers' pot is again boiling. The reorganization of the company under new control is at the moment deadlocked with the bondholders' committee definitely behind the Bowater interests, and creditors and common shareholders having voted big majorities in favor of the Duke-Price-Beaverbrook-Rothermere offer, while the preferred shareholders have maintained an independent attitude, although apparently inclined towards the Bowater control failing the possibility—which is said to be unlikely—of an internal reorganization.

In an effort to avoid foreclosure proceedings, representatives of the various interests involved are now engaged in negotiations looking towards a compromise between the two competing groups. Although discussions have not yet reached a stage where the possible development from these negotiations may be forecast, *The Financial Times* understands that prospects are bright for a compromise and early action on the reorganization of Price Bros.

It is significant that, while on opposing sides of the battle for control of the Price organization, the Bowater and Beaverbrook and Rothermere interests have been in cordial business relationship over a long period of years, which fact is expected to facilitate the negotiations now underway.

One of the moves of Bowater's Canadian Corporation, Montreal, has been to file papers in Washington under the terms of the new United States Securities Act, setting forth particulars of the contemplated acquisition of the mortgaged assets and probably other assets of Price Bros. & Co. in bankruptcy.

This marks the first step in the last stage of the struggle that has been going on since the early part of 1933 to determine where the future control of Price Bros. & Co. will rest.

St. Lawrence Paper Mills Report

The annual report of the St. Lawrence Paper Mills Company for the calendar year 1933 has now gone forward to shareholders. It shows an increased loss with tonnage sharply off, and a substantial reduction in working capital.

On behalf of the board, Ernest Rossiter, president, in his remarks to shareholders states that during the first three months of this year the company has been operating on considerably more tonnage than in 1933. He continues to state that through the pooling arrangements which were arrived at during the later months of 1933, the company has been receiving tonnage at the rate of 10,000 tons per year from this industry pool.

A loss for operations of $430,886 compares with $286,670 in 1932. Addition of depreciation at $131,608 and inventory write-off at $140,000, left a deficit for the year of $702,494. Previous deficit was brought forward at $1,495,450, leaving a deficit to be carried forward of $2,197,944.

During 1933, Mr. Rossiter's report points out, the company produced 39,042 tons of newsprint, as compared with 53,376 tons in 1932; 66,257 tons in 1931, and 95,566 tons in 1930.

Brown Corp.'s Showing

The annual report of the Brown Corporation and subsidiaries shows a loss of $276,183 before depreciation and interest. After taking care of these items, the company had a deficit of $2,689,350. These figures include the returns for the Canadian company, which operates a large pulp plant at La Tuque, Quebec.

This showing was better than that reported in 1932, the net loss being reduced by $1,753,257, although sales were slightly less in 1933. Despite the unsatisfactory earnings of the past two years, the company has been able to meet all its obligations in respect of its funded debt, both sinking fund and bond interest being up to date.

Consolidated balance sheet of the Brown Company exclusive of subsidiary log-driving companies, shows assets at November 30 last of $74,494,303. Current liabilities aggregate $4,472,858, of which $2,427,951 represent loans of one kind and another.

Fort Wayne Waste Dealers Organize

INDIANAPOLIS, Ind., April 16, 1934.—Waste material dealers of Fort Wayne, Ind., have filed articles of incorporation with the secretary of state here for the Fort Wayne Waste Material Dealers' Association. The corporation is formed to promote the interests of the dealers and has no capital stock listed. The incorporators are Abe Field, Elmer Wunderlin and Isadore J. Field.

Philadelphia Paper Market Is More Buoyant

Demand for Various Standard Grades of Paper Continues to Improve In Keystone State—Better Conditions Under Which Business Is Now Transacted Have Elements of Permanence—Position of Paper Stock Section Practically Unchanged

[FROM OUR REGULAR CORRESPONDENT]

PHILADELPHIA, Pa., April 16, 1934—Improvements in all branches of the trade, which first made themselves manifest a few months ago, were continuous as the new week opened. But above all is the exceedingly better conditions under which business is now being done, and which unquestionably has elements of permanence in it. Complaints are growing scarcer every day, and fears and uncertainties have been transformed into hopefulness, and that consumers in general have thrown off much of their timidity is abundantly reflected in this continued expansion in all branches of the trade. The waste paper market developed little further change this week. Prices held to about previous levels although buyers continued to operate on a limited scale.

Paper Distributors Code Explained

During the week T. H. B. Smythe, president of the Philadelphia Paper Trade Association, in company with Henry Adler of the Huff Paper Company left Philadelphia by motor, making their first stop at Lancaster, then Harrisburg and taking in Wilkes-Barre, Pittston and Scranton. The purpose of this trip was to impart to the merchants in the paper business all the information that is available regarding the various provisions of the Paper Distributing Code.

It was felt that on account of Mr. Smythe being a member of the Second Regional Committee Paper Distributing Trade Code Authority, he would be the logical one to make the trip in conjunction with Mr. Adler, who primarily is interested in bag problems. They were gone three days, and on their return expressed complete satisfaction with the way they were received by the paper merchants where they visited. A very successful meeting was held on Thursday night last in Pittston, in the office of C. R. Andrews Paper Company.

Mr. Andrews called together paper representatives from Wilkes-Barre, Scranton and surrounding territory, and after discussing the Code and its various ramifications, Mr. Smythe was asked numerous questions as to the workings of the open price plan and labor provisions, all of which he answered to the entire satisfaction of those present. Further trips will be made by members of the Administrative Code Committee at later dates.

Association Activities

A recent addition to the group of the fast growing membership of the Philadelphia Paper and Cordage Association, Inc., is the well known firm of Thomas W. Price & Co., 5th & Ludlow streets. This company, of which Norman W. Fort is the owner, was established in 1846, since which time it has developed a fine paper business and today it ranks as one of the largest fine paper houses in Philadelphia. This company has one of the largest ruling departments in the East, and among the many lines of papers sold may be mentioned the brands of Hammermill Paper Company, Dill & Collins, United States Envelope Company, American Writing Company, Dennison Manufacturing Company and others of national importance.

William A. Hentz, in charge of sales, formerly with D. L. Ward Company, will represent the company as contact man with the association, and it is expected that his experience, as former head of the Philadelphia Paper Trade Association, will be of material benefit to the association in its endeavor to bring together all of the paper and twine houses of Philadelphia in a group that has as its ambition to promote a friendly relationship and the interchange of business among the Philadelphia merchants.

Many instances can be cited, where, as a result of better knowledge of the merchandise sold by the members, much business has been placed in Philadelphia that would otherwise have been given to out-of-town sources. At the April meeting, on the 20th, at the Adelphia Hotel, each member will be given a bound group of letterheads of the rest of the members, containing detailed information of the lines each member has to offer. This will be a real directory of Philadelphia paper and twine merchants as well as the mills who are members. J. R. Howarth, of the company bearing his name, has directed this work and brought it into being and will be glad to testify to the mutual help of this original plan to stimulate business among the members.

Leslie C. Bartlett of the Eastern Paper Company, chairman of the Entertainment Committee, has appointed subchairmen to work with him in planning the annual spring outing at the Manufacturers Club, June 22, as follows: Golf, Arthur Sherrill; Tennis, Willard Parkes; Quoits, Charles Heverly; Music, Willard Parkes; Baseball, Amos Coath.

As the membership is nearly double that of 1933, it is planned to reach a high water mark this year. There will be silver cups awarded, and the usual contest will be held between the paper and twine houses for the golf award. as well as for tennis, quoits and baseball. As the time approaches and interest grows, it is expected that June 22 will be declared a holiday and the 61 members will bring along their salesmen to join in the festivities, which will culminate in a dinner at the club, where there will be appropriate music and entertainment. An invitation is extended to paper and twine houses out of town to join this group at the outing and thereby get a better understanding of the promotional work being accomplished. Reservations should be made with the secretary, Harry E. Platt, Denny Tag Company, Real Estate Trust Building, Philadelphia.

News of the Trade

The appointment of James J. Gallen, of Gallen Paper Company, 739 North 24th street, to the Administrative Committee, has been announced by Chairman W. S. Wilcox.

J. R. Howarth Paper Company have augmented its already very extensive line with Trojan Bond in white and assorted colors; these are manufactured by the American Writing Paper Company and are meeting with success.

Norbert A. Considine, president of the Paper House of Pennsylvania, has been away from his office for a few days, suffering from a cold.

Harold N. Newell, Philadelphia sales representative of the American Manufacturing Company, has been absent from his desk for two months on account of injuries.

Joseph Green, out of town salesman for the Garrett-Buchanan Company, is confined to his home with a broken wrist. It is expected he will be able to visit his trade in the course of two weeks.

Pacific TAPPI Meets at Seattle

The following report of the spring meeting of the Pacific Section of TAPPI was received from A. S. Quinn, Secretary-Treasurer of the Section.

The annual spring meeting of the Pacific Section of the Technical Association of the Pulp and Paper Industry was held at the Olympic Hotel, Seattle, Wash., on April 6 and 7, and truly turned out to be one of the best meetings the local Section has ever held. We were all more than pleased to have members from the Crown Willamette and Crown Zellerbach mills once again with us for our annual meeting, and the general expression of the meeting seemed to be the hope they would continue to lend their support to our Association.

Timber Resources and Wood Room Operation

Promptly at 9:30 Friday morning Lawrence Killam, President of the British Columbia Pulp and Paper Company and Chairman of the Pacific Section, opened the meeting, and after a very short word of greeting, proceeded at once to the first section of the morning program, namely, "Timber Resources of the Pacific Coast and Their Utilization in the Pulp and Paper Industry." T. T. Mungor, Director, Pacific Northwest Forest Experiment Station, presented a very interesting paper which aroused considerable interest from the membership. It seemed to be very humorous to find the number of gentlemen engaged in the pulp and paper industry who have no idea of the vast resources of the Northwest.

The second portion of the morning program, "Recent Developments in Wood Room Practice," followed with three very interesting papers on chippers and barkers. A number of these papers will be published in the PAPER TRADE JOURNAL.

At 12:30 a very enjoyable joint luncheon with the ladies was held in the Venetian Room, at which time our old friend Tom Shields came to bat once again with some of his very humorous stories. Our short luncheon was over at 1:30 in order that everyone might be back ready for business at two o'clock.

Sulphite Cooking Symposium

Prof. Warren L. Beuschlien of the University of Washington, conducted the afternoon session Friday—"A Symposium on Sulphite Cooking." All of the papers presented were very interesting and very thorough, but as I have said earlier in this report we really should have had a court stenographer present to record the discussion.

Our joint dinner with the ladies at 7:15 Friday evening proved very enjoyable. A 14-piece orchestra furnished by the hotel played throughout dinner and a world renown Spanish dance team did three numbers for us during the meal. Everything was over at 9:30 in order that a number of the members present might visit friends and relatives here in Seattle.

Elaborate Plans for International Convention

Our meeting reassembled Saturday morning right on the scheduled time. Rather than read all the papers listed on our morning program, the authors were requested to deliver brief summaries in order that the Association might have more time for a business meeting. The business meeting started at 10:30 with a complete and very detailed report from Mr. Heuer, the Chairman for the International Convention to be held in Portland, Ore., this fall. All of his committee chairmen were introduced to the members and were given an opportunity of requesting full cooperation in order that each and every function might be a complete success this fall. There were four members of the National Association present from the East, and all seemed very enthusiastic as to the number of Easterners whom we expect in Portland this fall. The Committee are prepared to take care of at least 800 at this meeting, made up of 500 from the East and 300 from the West Coast states.

On motion of C. W. Morden the local Section went on record as appreciating the loyal support which the Crown Willamette and Crown Zellerbach organizations have given us and instructed the Secretary to work in full cooperation with the key men of both organizations.

A motion from the floor was unanimously passed authorizing the Chair to appoint a Committee of Non-Fiberous materials to work in conjunction with the state authorities here in the Pacific Northwest. A copy of this resolution has been passed to E. F. Banker, Director of Conservation and Development for the State of Washington. The Chairman, Mr. Lawrence Killam, will appoint this committee within the next few days.

On the motion of Mr. Ray Smythe the Secretary was authorized to send a telegram to Nels Teren of the Oregon Pulp & Paper Company, who lies seriously ill at St. Vincent's Hospital in Portland. This telegram was dispatched immediately at the close of the business meeting.

On a motion from the floor the Executive Committee of the local Section was authorized to set definite dates for the spring and fall meetings in order that there may be no conflict between meetings of the Superintendent's Association and meetings of the Crown Zellerbach Superintendents and Technical Association. These dates have not as yet been set but will be recorded as soon as the Executive Committee have had an opportunity of making a decision.

At the suggestion from the Chair a motion was made and seconded from the floor authorizing a standing vote of thanks from the Pacific Section members to Kenneth Shibley who acted as Chairman of the Convention Committee for the spring meeting. Mr. Shibley's excellent work was fully praised by all the members from Friday morning until Saturday night.

On motion from the floor the meeting stood adjourned at 12:35 P. M. April 7, 1934.

Those who registered at the meeting were:

Lawrence Killam, president, B. C. Pulp and Paper Company, Vancouver, B. C.; Earl G. Thompson, Great Western Electro Chemical Co., Textile Tower, Seattle; S. W. Blanchard, Crown Willamette Paper Company, West Linn, Ore.; H. A. Vernett, Staley Starch Company, Congress Hotel, Portland, Ore.; A. F. Francis, Chromium Corporation of America, Milwaukee, Wis.; Ray Erchinger, Doran Co., Seattle, Wash; A. H. Lundberg, Western Manager, G. D. Jenssen Company, Seattle; Ray Smythe, 301 Park Building, Portland, Ore.; Ralph B. Hansen, Technical Director, Pulp Division, Weherhaeuser Timber Company, Longview, Wash.; J. V. B. Cox, sales engineer, Paper Makers Chemical Company, Guilds Lake, Portland, Ore.

S. B. Gorbett, Willamette Iron & Steel Co., Portland; T. W. Toovey, B. C. Pulp and Paper Company, Port Alice, B. C.; Wm. Osborne, chemist, Hooker Electro Chemical Company, Tacoma, Wash.; O. S. Cauvel, sulphite superin-

tendent, Washington Pulp and Paper Company, Hoquiam, Wash.; George Douglas, chemist, Washington Pulp and Paper Company, Port Angeles, Wash.; Ferdinand Schmitz, Rainier Pulp and Paper Company, Shelton, Wash.; Ward A. Tedrow, Western Bureau of Paper Standards, Portland, Oregon.

Thornton Munger, director, U. S. Forest Service, Portland, Ore.; M. W. Phelps, chief chemist, Crown Willamette Paper Company, Camas, Wash.; Ralph Shaffer, President, Shaffer Pulp Company, Tacoma, Wash.; A. D. Wood, Superintendent Shaffer Pulp Company, Tacoma, Wash.; J. D. Hull, consulting engineer, Seattle, Wash.; C. W. Morden, Morden Machine Company, Portland, Ore.

W. S. Hodges, Appleton Wire Works, Lewis Building, Portland, Ore.; C. R. P. Cash, chemist, St. Helens Pulp and Paper Company, St. Helens, Ore.; B. W. Sawyer, Foxboro Company, Lewis Building, Portland, Ore.; Harold Hauff, chemist, Pulp Division, Weyerhaeuser Timber Company, Longview, Wash.; Sam Salmnson, sulphite superintendent, Crown Willamette Paper Company, Camas, Wash.; J. B. Hassler, Simns, Worden, White Company, 81 First street, Portland, Ore.; N. W. Coster, chemist, Soundview Pulp Company, Everett, Wash.; J. D. Rue, Hooker Electro Chemical Company, Tacoma, Wash.; John M. Carlson, assistant superintendent, Soundview Pulp Company, Everett, Wash.; G. J. Armbruster, general superintendent, Soundview Pulp Company, Everett, Wash.; H. H. Richmond, chief engineer, Electric Steel Foundry Company, 475 N. 24 street, Portland.

R. S. Hatch, Willamette Timber Company, Longview, Wash.; Myron W. Black, chief chemist, Inland Empire Paper Company, Millwood, Wash.; N. A. Lewthwaite, National Paper Products, Port Townsend, Wash.; F. A. Nicholson and W. T. Prichard, Stetson-Ross Machine Company, 3204 1st street, South Seattle, Wash.; E. G. Drew, J. O. Ross Engineering Company, Portland, Ore.; George Mitchell, Wallace & Tierman Company, Seattle, Wash.; H. T. Peteran, Pulp Division, Weyerhaeuser Timber Company, Longview, Wash.; Sigurd Norman, Sumner Iron Works, Everett, Wash.; Carl E. Braun, manager, Hawley Pulp and Paper Company, Oregon City, Ore.; H. J. Hixon, University of Washington, Seattle, Wash.; H. A. Des Marais, General Dyestuff Company, Terminal Sales Building, Portland, Ore.; Harold R. Bailey, Union Screen Plate Company, Fitchburg, Mass.; Fred Giesking, Ellis-Chalmers Manufacturing Company, Seattle, Wash.; James Brinkley, James Brinkley Company, South Seattle, Wash.; H. E. Beebe, Chain Belt Company, Seattle, Wash.; Harvey Smith, Pacific Pulp and Paper Company, Seattle Wash.; T. E. Moffett, Hooker Electro Chemical Company, Tacoma, Wash.; Erik Ekholm, superintendent, Puget Sound Pulp and Timber Company, Bellingham, Wash.; B. T. Larrabee, superintendent, Pulp Division, Weyerhaeuser Timber Company, Longview, Wash.; H. R. Heur, assistant superintendent, Pulp Division, Weyerhaeuser Timber Company, Longview, Wash.

Harold Fretz, chemist, Olympic Forest Products Company, Port Angeles, Wash.; A. S. Quinn, Stebbins Engineering and Manufacturing Company, Textile Tower, Seattle, Wash.; John E. Brown, Pacific Pulp and Paper Company, Seattle, Wash.; J. H. Angevine, sales manager, Crane Company, Seattle, Wash.; H. H. Lowry, Columbia Steel Company, Seattle, Wash.; R. T. Petrie, Bagley & Sewall Company, Portland, Ore.; W. L. Beuschlew, University of Washington, Seattle, Wash.; E. J. Bartell, E. J. Bartell Company, Seattle, Wash.; W. King, Allis-Chalmers Manufacturing Company, Seattle, Wash.; Blaine Kearns, Westinghouse Electric Company, Seattle, Wash.; R. E. Chase, R. E. Chase Company, Tacoma, Wash.; James A. Osborne, De Laval Steam Turbine Company, Seattle, Wash.

Eber Badcon, C. T. Takahashi Company, Seattle, Wash.; Fred Alsop, Van Waters & Rogers, Seattle, Wash.; Harvey Brown, New Jersey Zinc Company, Chicago, Ill.; R. S. Beall, New Jersey Zinc Company, San Francisco, Cal.; R. J. Neill, Haynes Stellette Company, San Francisco, Cal.; E. A. Heiss, Wallace & Tiernan Company, Terminal Sales Bldg., Seattle, Wash.; Dr. H. K. Benson, Dean of Chemistry, University of Washington, Seattle, Wash.; T. M. Shields, Simmons Saw & Steel Company, 1934-1st South, Seattle, Wash.; D. E. Cousins, assistant superintendent, St. Regis Kraft Company, Tacoma, Wash.

Adolph Orup, Soundview Pulp and Paper Company, Everett, Wash.; Eugene Cuningham, Cascade Machinery Company, Seattle, Wash.; Dr. H. E. Minsey, Rainier Pulp & Paper Company, Shelton, Wash.; F. B. Sams, Ellis-Chalmers Manufacturing Company, Seattle, Wash.; C. S. Conrad, Columbia Steel Company, Seattle, Wash.; L. M. Start, Rice, Barton & Fales, Worcester, Mass.; Otto H. Sangder and Arnold Hegg, Grays Harbor Pulp & Paper Co., Hoquiam, Wash.; F. A. Gladding, Soundview Pulp and Paper Company, Everett, Wash.; Dr. R. E. Brown, Rainier Pulp and Paper Company, Shelton, Wash.; Fred Shaneman, Tacoma Electrochemical Company, Tacoma Bldg., Tacoma, Wash.; Andreas Christensen, Grays Harbor Pulp and Paper Company, Hoquiam, Wash.; A. L. Bibbins, Electric Steel Foundry Company, Seattle, Wash.; C. B. Smith, Corn Products Refining Company, Ed Johnson, Chehalis, Wash.; Thomas Bannon, Western Gear Works, Seattle, Wash.; Allan Anunson, Seattle, Wash.; Vicente Caitle, Seattle, Wash.; Arthur Zimmerman, manager, Pacific Strawboard and Paper Company, Port Townsend, Wash.; A. H. Hooker, Jr., H. Hooker Electro Chemical Company, Tacoma, Wash.

German Technical Men Reorganize

The prevailing system of Government in Germany is having its influence on technical associations, in which the parliamentary system and voting by majorities is replaced by the responsibility of leaders. Accordingly the Government installed Mr. Georg Feder, engineer and Secretary of State, as leader of the technical associations, and he invited their leaders to bring their by-laws into conformity with the ideas of the Government.

When, therefore, the annual convention of the German Pulp and Paper Technicians was held in Berlin recently, Mr. B. Deutsch, a director of the Zellstofffabrik Waldhof, and president of the association referred to the subject. He intimated that the board of the association had in July resolved to resign, and that a task of the present convention was to elect a leader, who should appoint the members of the new board, change the by-laws and conduct the affairs of the association in the spirit of the Government.

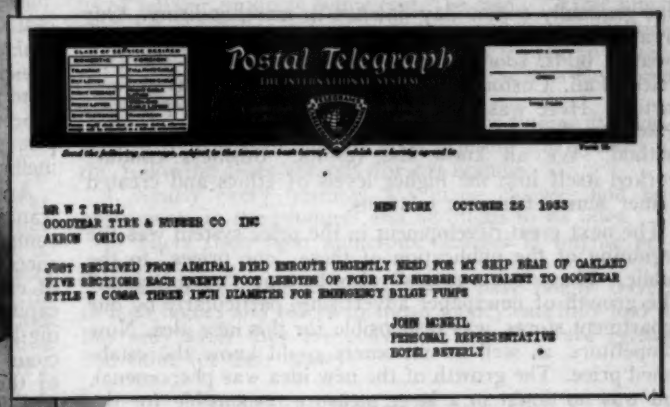
Coming to the election of a leader, Dr. Muller-Clemm, a director of the Zellstofffabrik Waldhof, was unanimously elected.

On assuming the chair, Dr. Clemm asked the officers of the association (Messrs. Opfermann and Schark) to remain in their positions, and requested the following members to enter into the "Leader's Circle," to assume the duties of the former board: Prof. Dr. Brecht, of the Paper Institute Darmstadt; Dr. Gunther, of Gunther's paper mill in Greiz, and the expert in artificial silk; Mr. Jentgen, Prof. Dr. von Possanner, of the Paper Institute of Kothen; Dr. Sieber of the sulphite mill in Groditz, Saxony, and Dr. Wenzl, Burg Gretesch. In addition the presidents of the provincial groups will be members of the "Leader's Circle."

WORLD'S PAPER TRADE REVIEW.

WITH BYRD IN POLAR SEAS!

His Supply Ship "Bear" Clears Bilge with GOODYEAR SUCTION HOSE

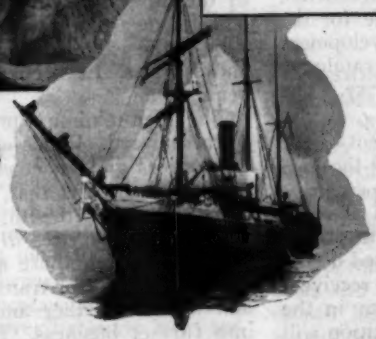


Postal Telegraph
THE INTERNATIONAL SYSTEM

MR W T BELL NEW YORK OCTOBER 26 1933
GOODYEAR TIRE & RUBBER CO INC
AKRON OHIO

JUST RECEIVED FROM ADMIRAL BYRD ENROUTE URGENTLY NEED FOR MY SHIP BEAR OF OAKLAND FIVE SECTIONS EACH TWENTY FOOT LENGTHS OF FOUR PLY RUBBER EQUIVALENT TO GOODYEAR STYLE W COMMA THREE INCH DIAMETER FOR EMERGENCY BILGE PUMPS

JOHN MCNEIL
PERSONAL REPRESENTATIVE
HOTEL BEVERLY



ADMIRAL ORDERS STYLE "W"

His Own Message

Reads Like a G.T.M. Specification

Byrd and his gallant crew are down there now, alongside the great ice barrier at Bay of Whales and Little America. Only the radio binds them to kin.

Standing by also has been the Admiral's supply ship, "Bear of Oakland", equipped with another steadfast connection with safety—*Goodyear Style "W" Suction Hose.*

We speak of it very modestly in our catalog: "It will give excellent service and where it is given good care it will stand up under considerable punishment."

Evidently the Admiral weighed every word of that when he radioed his order.

YOU and the GTM

Your business, too, may be exploring, these days. Certain things you can anchor to: *Quality*, scientifically produced; *Efficiency*, expertly applied.

Goodyear makes a world-recognized line of Mechanical Rubber Goods. The G. T. M.—Goodyear Technical Man—knows where these goods can operate to your advantage. Why not get your equipment problem and the G. T. M. together?

Write Goodyear, Akron, Ohio, or Los Angeles, Calif., or call your Goodyear Mechanical Goods Distributor.

BELTS • MOLDED GOODS
HOSE • PACKING
MADE BY THE MAKERS OF GOODYEAR TIRES

THE GREATEST NAME IN RUBBER

GOODYEAR

The Principle of the Open-Minimum Price

NEW YORK, April 16, 1934.

EDITOR, PAPER TRADE JOURNAL:

Gradually the conduct of all business is imperceptibly working upward and upward on to a higher plane. The established principle of "caveat emptor"—let the buyer beware—is now passing out for good.

We of this generation remember perhaps the method of business conduct in the days of our youth. There was no open price then to the customer. It was just "catch as catch can." "Get all the traffic can bear." Salesmen depended on averages. No two customers got the same treatment. Every sale was the result of a trade, and bargain. But gradually a new day dawned in merchandising. Our great American merchant princes, working against the greatest odds, soon established the principle of the One Price to all. Customers had no further need to "trade and barter." Here was the price—one price to all. The new system gradually won out. Trade gravitated to the new method. We all know the results. Business conduct worked itself into the higher levels of ethics and created a finer sense of human relations.

The next great development in the price system was the beginning of the publication of these "one prices" to the public. These "one prices" also became "open prices." The growth of newspaper advertising, particularly by our department stores, was responsible for this new idea. Now competitors, as well as customers could know the established price. The growth of the new idea was phenomenal, and was no doubt in a large measure responsible for the gigantic growth of the newspaper field. The development of the catalogue and especially of the mail-order catalogue all helped to establish the idea of the open price. The public was no longer a buyer in the dark.

And now, we are beholding a further development of the price system. Not only the idea of one price and the idea of an open price, but the idea of a minimum-open price to all. All prices are to be absolutely open and above a certain minimum level. The fight through competition hereafter will be out in the open—not behind closed doors. Customers will no longer misquote quotations received. The facts will be open to all. Prices will be out in the broad daylight, subject to the gaze of all. Competition will be on equal footings and played according to the rules, and the best man will win. And under the structure of the open price is the secure concrete foundation of the established minimum price, which will guarantee the security of the industry itself. Perhaps the new system should be referred to not as the open price, but the open-minimum price system.

In practice, the open-minimum price system is carried out through the various code authorities. Congress has empowered each industry with the right of self-government. Codes of conduct for each industry have been worked out and are now generally established. The authorities created under these codes have the right to call for the listing of each firm's prices in a given field of operation. These listed prices must be adhered to, until new prices are listed and these must all be above one's cost. The minimum price shall generally be above one's cost. If one does not choose to file his price with his Code Authority, he can not sell below the lowest price filed by any of his competitors. The system becomes effective as soon as 25 per cent of a given trade have filed their minimum prices.

Everyone is bound by law to adhere to this system, whether one signed the NRA code or not. Many still feel they are not bound, unless they voluntarily "join up." Code authorities have the right to establish various grading committees to establish standard grades and qualities, for each of which, open and minimum prices must be filed.

The outstanding feature of all codes established is of course, the one against selling below cost. The reason is apparent. The old system of selling below cost has without question done most of the damage in the destruction of one industry after another. This ruthless system of striking below the other fellow's belt had to be eliminated. The new system of the open-minimum price will eradicate in the future the vicious practice of selling below cost.

A common query to-day is "What shall be considered as cost?" "How shall it be determined?" Most codes specify replacement cost plus the cost of labor involved. But the principle of the open-minimum price will be so enforced as to protect the small efficient operator as well as the large concern, having relatively low unit costs. The minimum price system is not designed to protect the concern with inefficient management having high operating cost.

And now, will the new idea work? Why not? Who wants to recall the recent days of vicious, unreasonable competition? The entire structure of any business or the success of the individual is built up on foundations only of established equities in the values of his land, labor or capital. When these values are destroyed, through the selling-below-cost, what happens? The answer is, that the vicious circle begins to operate. Everyone takes a cut out of the other fellow, until the spiral, working downward and downward wipes out all remaining equity in business —be it the value of merchandise, or real estate or wages and services. Each cut helps to level all industry to pauperization.

The open-minimum price system has already started the spiral upward. It has established better values on goods, on services and all economic factors. The study of economics teaches us that, as the marginal values increase there appears forthwith, more room in the business structure, for the services of allied industries. As the margin spreads upward, there appears more room for salesmen, for advertising, for transportation, for labor, for research, and for the further and further re-investment of profit into further business. The less margin, the less business for all, the more margin, the more room for all.

And as prices become open and minimum prices are recognized, the old practice of price competition will pass on. It will give place to competition of a higher order, the kind of competition which will bring out better service to others, the creation of quality merchandise, improved methods of distribution and will force and develop the finer things which all of us have within ourselves.

A. GEORGE LUTZ,
Great Atlantic Paper Co.

High Water Handicaps Holyoke

[FROM OUR REGULAR CORRESPONDENT]

HOLYOKE, Mass., April 17, 1934.—Following a rainfall of nearly three inches the Connecticut River rose again Friday and beat the record for the year, rising to 10.27 over the big dam. The Chemical Paper Company, Newton Paper Company and Franklin Paper Company were forced to shut down several days. The Taylor Logan Company operated with its auxiliary power. The Valley Paper Company was crippled as to its water power as well as other mills below.

Big Timber Limits Sold

A despatch from Victoria, B. C., states that the sale of 3,000 acres of standing timber on Vancouver Island, rated the finest and largest stand of Douglas fir and spruce in North America, has recently been completed. Located west of Cowichan Lake, the stand is estimated to carry upward of 1,000,000,000 feet of timber.

Known to the timber world as the Lacey holdings, named after J. D. Lacey of Chicago, the tract was sold by Reuben F. Chapin of London, who has held it more than twenty years. It was purchased by Industrial Timber Mills, Ltd., the Empire Lumber Company and other allied organizations controlled by the American Finance and Securities Company of New York and the estate of Henry D. Moore of Philadelphia. A basic price of 40 cents a thousand was reported paid for the timber. On some of the acreage farthest removed the price will run up to a maximum of 75 cents a thousand feet.

Union Bag Elects Directors

[FROM OUR REGULAR CORRESPONDENT]

HUDSON FALLS, N. Y., April 16, 1934.—Directors elected by the Union Bag and Paper Company for the year include a number of new faces among whom are Homer A. Vilas, Leroy W. Campbell, Allan J. Miller and H. S. Daniels. Mr. Vilas is a native of Ogdensburg and was graduated from St. Lawrence University in the class of 1913. In 1918 he became a partner in the bond brokerage house of Vilas & Hickey and in 1929 he was elected a vice-president of F. L. Carlyle & Co. In 1931 he withdrew and became a general partner of the firm of Cyrus J. Lawrence & Sons in New York City. Since his graduation from St. Lawrence University he has been extremely active in the affairs of that institution.

Paper Mill Employment Increases

Paper employment in February in 414 paper and pulp mills was reported to the Bureau of Labor Statistics, Department of Labor, at 102,488 an increase of 2.2 per cent over January and of 28.7 per cent over February of last year, while the average weekly February payrolls in these same mills were $1,894,460, an increase of 7.2 per cent over January and of 40.4 per cent over February last year.

Three hundred and thirty-six paper box factories reported their February employment at 25,488, an increase of 3.6 per cent over January and of 19.3 per cent over February of last year, while the average weekly February payrolls in these plants were $457,447, an increase of 9.4 per cent over January and of 30.4 per cent over February of last year.

Dill & Collins Changes

Dill & Collins, Inc., Philadelphia, Pa., announces that Grellet Collins, for many years president of this company, has been elected chairman of the board of directors.

This action is in conformity with the company's policy of having active direction of affairs in the hands of younger men, while retaining the accumulated experience and wislom of its older executives in an advisory capacity.

H. P. Carruth succeeds Mr. Collins as president of this company. W. R. Maull continues as vice-president. Sydney Ferguson was re-elected treasurer, and C. E. Barnard, secretary and assistant treasurer. M. G. Benson has been appointed general manager, and W. R. Ingersoll continues as sales manager.

Paper Mill Finds Advertising Pays

[FROM OUR REGULAR CORRESPONDENT]

INDIANAPOLIS, Ind., March 26, 1934—How an Eastern paper manufacturing company found business "rock bottom" during a three-year period that the organization did no advertising, and then in turn, discovered its sales picking up when the company launched an advertising program, was related to members of the Advertising Club of Indianapolis here Thursday by Watson Gordon, advertising manager of the S. D. Warren Paper Company of Boston, Mass. His subject was "Why a Manufacturer Resumed National Advertising." He explained that his company advertised consistently twenty-five years but discontinued its program for three years beginning in 1931.

"We suffered ills like other manufacturers and in addition found the paper business in a price war which forced us to sell our products below cost," he said. "After much thought and following attempts to get business through numerous other channels, we decided to launch an advertising and merchandising program. The results have been highly beneficial."

The speaker declared that the nation is finding it necessary to return to the use of good printing and pointed to the following three reasons for his opinion:

1. Nearly every business has made changes and improvements in the products and additions to its lines.

2. There have been numerous changes in buying personnel.

3. Three years of money shortage have taught buyers in both homes and offices to spend money carefully and to buy only after they are convinced that they are getting full value for their money.

Japanese Paper Production

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., April 18, 1934.—The Japanese Paper Manufacturers' Association reports the output of foreign style paper by its members during the month of January at 62,008 short tons, a drop of 2,702 tons compared with the previous month, but an increase of 5,243 tons over January of last year, according to reports to the Department of Commerce.

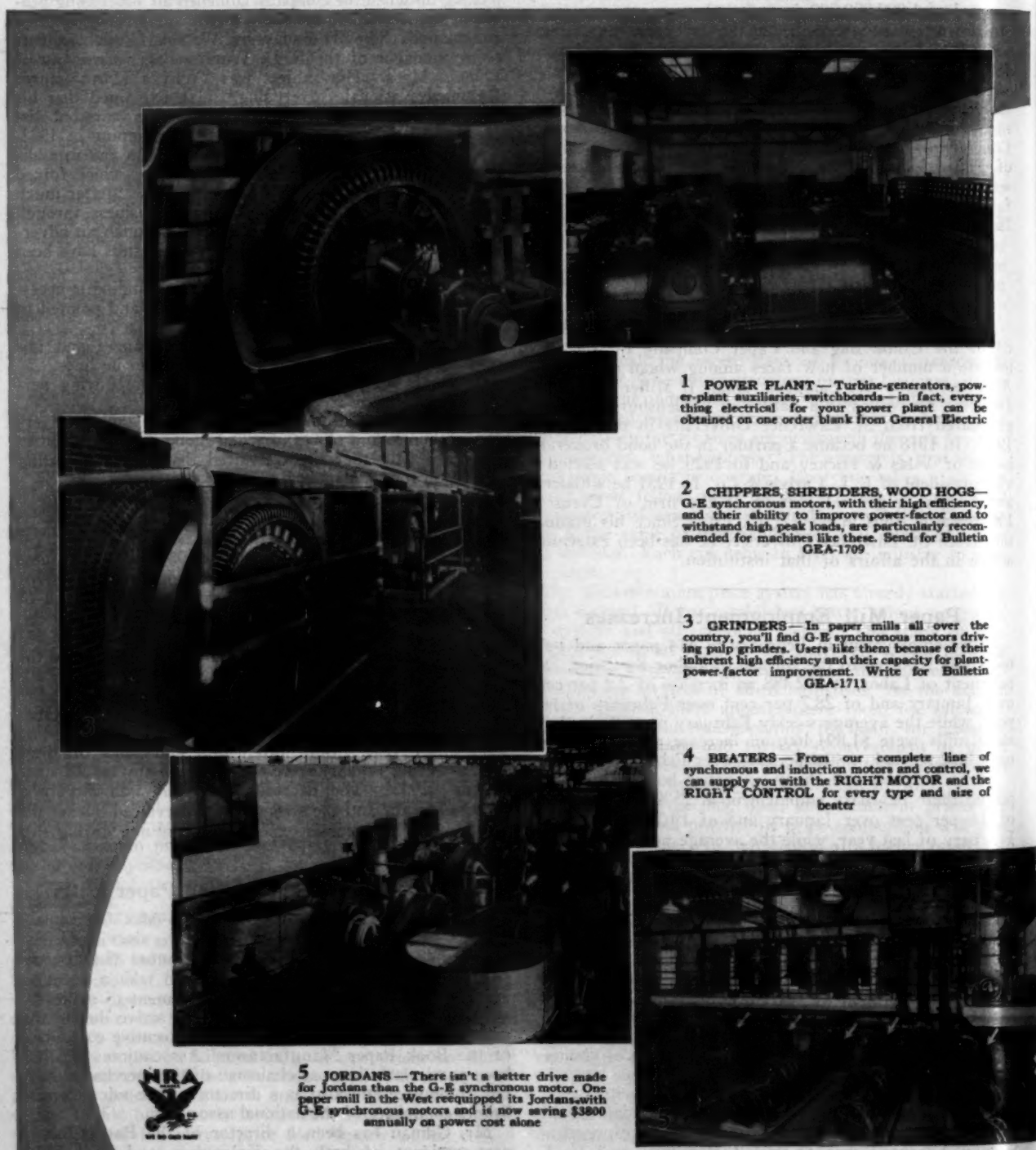
Sales of foreign style paper during January amounted to 61,870 tons, a decline of 3,711 tons from the December sales and of 2,756 tons compared with the corresponding month last year. Both production and sales of these papers during January were the lowest in any month since August, 1933. The decrease, however, was largely a seasonal factor and the strong demand evinced during the last half of last year is expected to continue during this year.

A. G. Gilman Leaves Allied Paper Mills

KALAMAZOO, Mich., April 16, 1934.—Alex G. Gilman, president of the Allied Paper Mills, Inc., since 1922, last week tendered his resignation to the directors of that company. Beyond stating that he plans to take a vacation and rest, Mr. Gilman had no announcement to make regarding his future plans. He has been active during the past year as a member of the national executive committee of the Book Paper Manufacturers' Association. He has been particularly busy as chairman of the merchants' contact committee and also as a director of the sales to publishers committee of the national association.

Mr. Gilman has been a director of the Park Club, a past-president of both the Kalamazoo and Gull Lake Country clubs, and of the Michigan Paper Manufacturers' Traffic Association. He was formerly a director of the Chamber of Commerce.

FROM POWER PLANT



1 POWER PLANT — Turbine-generators, power-plant auxiliaries, switchboards — in fact, everything electrical for your power plant can be obtained on one order blank from General Electric

2 CHIPPERS, SHREDDERS, WOOD HOGS — G-E synchronous motors, with their high efficiency, and their ability to improve power-factor and to withstand high peak loads, are particularly recommended for machines like these. Send for Bulletin GEA-1709

3 GRINDERS — In paper mills all over the country, you'll find G-E synchronous motors driving pulp grinders. Users like them because of their inherent high efficiency and their capacity for plant-power-factor improvement. Write for Bulletin GEA-1711

4 BEATERS — From our complete line of synchronous and induction motors and control, we can supply you with the RIGHT MOTOR and the RIGHT CONTROL for every type and size of beater

5 JORDANS — There isn't a better drive made for Jordans than the G-E synchronous motor. One paper mill in the West reequipped its Jordans with G-E synchronous motors and is now saving $3800 annually on power cost alone

GENERAL

TO FINISHING ROOM

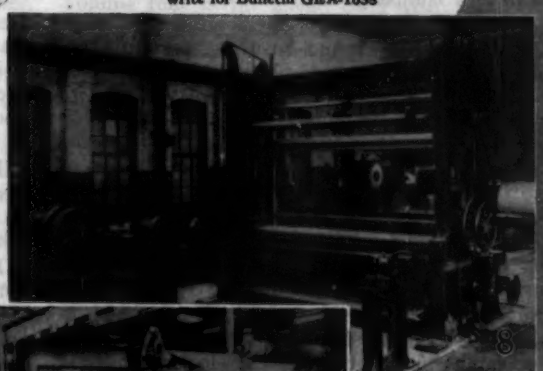
See General Electric for Everything Electrical

YOU'LL find it profitable as well as convenient to see General Electric for everything electrical in your paper mill—from turbine-generators for steam-power-balance, complete switchgear to tie-in with purchased power, and distribution equipment for your plant, to the double-motor or dual-frequency drives for your supercalenders in the finishing room. General Electric can meet your every need with dependable equipment, progressive engineering, and prompt service.

Study the pictures on this page. They were taken in leading paper mills from coast to coast, and offer you photographic proof of General Electric's ability to supply your requirements—proof of the confidence placed in G-E equipment by paper-mill men.

Remember, for everything electrical, see General Electric. General Electric, Dept. 6A-201, Schenectady, N. Y.

9 SUPERCALENDERS—General Electric double-motor and dual-frequency supercalender drives are characterized by maximum safety, minimum floor space, and simplicity of control. For complete information on these modern drives, write for Bulletin GEA-1638



7 PAPER MACHINES—Installing or modernizing your paper machines? If so, it will pay you to see General Electric's two types of drive—the sectional drive and the single-motor drive. Each offers distinct advantages

8 WINDERS—Before you install new winders or modernize the drives on your present ones, don't fail to see our new variable-voltage winder drives with these features: (1) automatic tension control; (2) winds rolls of uniform density; (3) saves power (50 per cent in one case). Write for Bulletin GEA-1745

6 PUMPS—Close coöperation between pump manufacturers and our designing engineers makes it possible for you to obtain motors and control from General Electric that are literally "tailor-made" for every type and size of pump—a highly important factor where dependability is so essential

GE

020-32

ELECTRIC

CONSTRUCTION NEWS

A Summary of Vital Facts Regarding Construction, Finances and Operation of Paper Mills

Construction News

Los Angeles, Cal.—The Crown-Willamette Paper Company, 2945 East 12th street, has engaged the Austin Company of California, 777 East Washington street, engineer and contractor, to prepare plans for proposed new addition to plant, recently referred to in these columns, to be one-story, 100 x 200 ft., to cost over $75,000, with equipment. New unit will be used primarily for the manufacture of paper bags and containers. On completion of this structure, the company proposes to build another addition, one-story, about 70 x 200 ft., to cost close to like sum. The second unit will be used for same line of production. Headquarters of company are at 343 Sansome street, San Francisco, Cal.

Miami, Fla.—The Paper Box Corporation, Miami, care of Frank J. Walsh, Miami, recently organized, plans operation of new local plant for the manufacture of a line of paper boxes and containers. Frank J. Carr, Miami, is interested in new company.

Niagara Falls, N. Y.—The American Sales Book Company, 3000 Highland avenue, manufacturer of commercial paper goods, has approved plans for new addition to mill, to be one-story, reported to cost over $50,000, with equipment. General contract has been let to Wright & Kremers, Inc., Main and Pine streets, city, and superstructure will be placed under way at early date. A list of equipment to be installed will soon be arranged.

St. Louis, Mo.—The Cupples-Hesse Envelope and Lithographing Company, 4173 North Kingshighway, manufacturer of commercial paper products, has awarded general contract to the Austin Company, Arcade Building, for new addition to plant on site recently acquired at Kingshighway and Penrose street, adjoining new factory unit, likewise lately purchased, at same location. New building will be one-story, 75 x 170 feet, reported to cost over $65,000, with equipment. Superstructure will be placed under way at early date. Contracting company has also acted as engineer in design of new unit.

Long Island City, N. Y.—The Light Corrugated Box Corporation, recently organized under state laws to operate a local plant for the manufacture of paper boxes and containers, has arranged for an increase in initial capital of $100,000, to $100,000 and 200 shares of common stock, no par value. Plant operations will soon begin. New company is represented by Ketzen, Mana & Siegel, 51 Chambers street, New York, attorneys.

Old Hickory, Tenn.—The duPont Rayon Company, 350 Fifth avenue, New York, N. Y., manufacturer of cellulose rayon products, has approved plans for new addition to power house at mill at Old Hickory, reported to cost over $70,000, with equipment. Contract has been let to the Combustion Engineering Company, Inc., 200 Madison avenue, New York, for two new 1250-hp. boilers, super-heaters and air preheaters, and awards for other equipment will soon be made. Company has plans maturing for new addition to branch mill at Waynesboro, Va., with equipment installation to provide for employment of over 1,500 additional workers. Project will consist of several new units, reported to cost over $350,000, with machinery.

New York, N. Y.—The Economy Paper Box Company, Inc., lately organized, has leased ground floor space in building at 118 West Twenty-seventh street, and will occupy for new distributing plant and company headquarters.

Pittsburgh, Pa.—The Pittsburgh Wax Paper Company, manufacturer of waxed and other processed paper stocks, has completed plans and soon begins construction of new plant on site recently leased at Twenty-eighth and Railroad streets, recently referred to in these columns, to be one-story, approximating 35,000 square feet of floor space, reported to cost about $45,000, with equipment.

Philadelphia, Pa.—C. F. Decker, Inc., 9 South Fifteenth street, manufacturer of commercial paper products, stationery specialties, etc., has leased entire four-story building at 902 Chestnut street, 33 x 230 feet, and will occupy for new plant, for storage, distribution and other operating service. Improvements will be made in building. It is expected to have ready for occupancy early in May.

Kenmore, N. Y.—The Karl G. Franklin Paper Company, Inc., has arranged for increase in capitalization from 450 to 1,000 shares of common stock, no par value, with preferred stock continuing at $25,000, as heretofore.

Baltimore, Md.—Work is under way on rebuilding of portion of storage and distributing plant of Matthews Brothers, 115 Hopkins place, manufacturer of paper boxes and containers, occupied under lease, recently damaged by fire as reported in these columns. Project will cost over $25,000, including equipment. General contract has been awarded by owner, the Safe Deposit & Trust Company, 9 South street, to John E. Marshall & Sons, 117 South street.

Johnson City, N. Y.—The Felters Company has plans under way for new two-story plant unit on local site, totaling about 40,000 square feet of floor space, reported to cost over $50,000, with equipment. It will be used for increased production at local mill. Headquarters of company are at 214 South street, Boston, Mass.

Three Rivers, Que.—The Canadian International Paper Company is making ready to place another paper-making machine in service at local newsprint mill, making the eighth and last unit to be placed in production. Operation is scheduled to begin about May 1, when additions will be made to the working quota. It is expected to keep the plant on full production schedule for an indefinite period.

Istanbul, Turkey—In connection with a five-year

industrial expansion program, the Ministry of Industry, Government of Turkey, is considering construction of a new paper mill at Anatolia, comprising several operating units, with storage and distributing buildings, power house, machine shop and other mechanical departments. Entire project is reported to cost over $500,000, with equipment.

New Companies, Etc.

New York, N. Y.—The Massa Paper Exports, Inc., has been incorporated with a capital of $25,000 and 100 shares of common stock, no par value, to deal in paper products of various kinds. New company is represented by Herbert H. Miller and Joseph L. Frieder, 362 Fifth avenue, New York.

South Bend, Ind.—Campbell Paper Box Company has filed notice of change in company name to the Campbell Box & Tag Company, to provide for proposed expansion in line of manufacture.

Wilmington, Del.—The Anchor-Capstan Corporation has been incorporated in Delaware, under direction of the Corporation Trust Company, Industrial Trust Building, Wilmington, with capital of 250 shares of stock, no par value, to manufacture paper and corrugated paper boxes, containers, etc.

Chicago, Ill.—The D. W. Dietrich Paper Company, 228 North LaSalle street, has filed notice of change in company name to the Everett Paper Company.

New TAPPI Members

The Executive Committee of the Technical Association of the Pulp and Paper Industry has announced the following elections to membership:

William T. Doyle is vice-president of the Sturtevant Mill Company, Harrison Square, Boston, Mass., with whom he has been connected for the past 25 years as a designer, builder and operator of machinery. Mr. Doyle is the inventor of the new Sturtevant bale pulper.

Erik F. Kruse is the chemical engineer of the United Paper Mills of Copenhagen, Denmark, and is a graduate of the Technical University of Copenhagen.

E. Peterson is manager of paper industry sales for the B. F. Goodrich Company, Akron, Ohio, and has read a number of papers at TAPPI Section meetings dealing with rubber covered rolls.

Thomas L. Sterling, sales and service engineer of the Paper Makers Chemical Corporation, Holyoke, Mass., is a 1925 graduate of Cornell University and was formerly a chemist for the West Virginia Pulp and Paper Company, Mechanicville, N. Y.; E. I. duPont de Nemours & Company, Parlin, N. J., and the Hercules Powder Company, Wilmington, Del.

Carl T. Welte, paper technologist, Champion Fibre Company, Canton, N. C., is a 1931 graduate of the New York State College of Forestry and formerly employed by the Hammermill Paper Company, Erie, Pa., and the Dexter Sulphite Pulp and Paper Company, Dexter, N. Y.

Hear Tax Abatement Cases

[FROM OUR REGULAR CORRESPONDENT]

SPRINGFIELD, Mass., April 17, 1934.—Hearings on the petitions of the Chemical Paper Manufacturing Company and Crocker-McElwain Paper Company of Holyoke for abatement of taxes in that city are being held here by three members of the State Board of Tax Appeals. The hearing promises to be long drawn out but is being closely watched by paper mill men in Holyoke and vicinity as the decisions may lead to other petitions being filed with the board. The board viewed the properties of both mills last week.

Weather Handicaps Indianapolis Demand

[FROM OUR REGULAR CORRESPONDENT]

INDIANAPOLIS, Ind., April 16, 1934.—If it ever would turn spring in earnest, the paper trade here might pick up somewhat, but the prolonging of winter seems to have dulled the edge during the last week. For one thing, temperatures hovering just above the freezing mark effectually have curtailed any immediate prospect for the sale of summer specialties. It was thought by this time there would be some orders for specialties, but the retailers now will wait until it turns warm again.

In the fine paper list there will be some improvement during this week because of vast quantities that must be purchased by printers in the various counties who have been the successful bidders for printing the ballots for the May primaries. The ballots will be larger than ever before, the list of candidates in some counties running well over a thousand on two major tickets alone. In Indianapolis the total ballots will be well over three-quarters of a million which makes a lot of paper. Because of the long lists, machines can not be used in any of the counties.

The remainder of the fine paper market is spotty. Some demand is being received for direct mail campaigns but the volume is not high.

Demand for bags and wrapping paper seems to have suffered less recently. Because of the lateness of spring, demand from hothouse growers of vegetables in this section for wrappers and bags has continued good and likely will continue for several weeks to come. Cleaners and laundries are active customers and the retail trade is buying about the same as before the Easter season bgan. Kraft has suffered locally, but prices hold the same.

Newsprint jobbers say there is a fair demand, no noticeable increase over the last two or three weeks, but a volume that is far ahead of a year ago.

Paper stock men are somewhat discouraged, even though they are getting fair prices for what they sell. They complain because of the indifferent mill demand.

Thirty Paper Plants Have Perfect Score

Thirty out of sixty-two paper mills and paper goods manufacturing plants in Michigan, Illinois, Minnesota, and Wisconsin established perfect records in a No-Accident Contest recently conducted by the Employers Mutual Liability Insurance Company of Wausau, Wis. The contest included 1,160 concerns representing 51 industries in the four states. Workers in paper mills and paper goods manufacturing plants competed in an effort to reduce accidents in their plants for the seven month period beginning June 1, 1933, and ending December 31. The results of the contest are indicative of the growing interest in safety existing in industry today.

The paper mills and paper goods manufacturing plants were classified into groups according to the number of man-hours worked during the contest period. The final standings of the contestants were determined by the number of lost-time accidents figured against the total number of hours put in by all employees. Workers in 62 paper mills and paper goods manufacturing plants put in 10,651,557 man-hours during the seven month period. Two hundred and eighty-seven accidents occurred giving the industry a final frequency of 27 accidents per million man-hours worked.

Plaques and certificates were presented to the winners as mementos of their standing. Both employers and employees of the concerns are enthusiastic over their safety records for this period and their achievement in the contest.

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COMING EVENTS

American Pulp and Paper Mill Superintendents' Association, annual convention. Headquarters Poland Spring House, South Poland, Me., June 20-22, 1934.

Technical Association of the Pulp and Paper Industry, Fall meeting. Headquarters Multnomah Hotel, Portland, Ore., September 10-13, 1934.

RECOVERY IN FULL SWING AT START OF SECOND QUARTER

Industry moved ahead vigorously in the first quarter of 1934. Increased activity, visible in a number of lines late in 1933, was extended to all major industries in the first three months of 1934, with gains in production, sales, prices, employment, and pay rolls recorded on a far greater scale than in the corresponding period of any recent year, according to a survey of industry for the first quarter of 1934, which has just been completed by the Research Department of Dun & Bradstreet, Inc.

"The extent of the industrial gains is shown in the trends of seven primary factors," the survey points out, "all of which point to but one conclusion: That American industry enters the second quarter of 1934 with recovery in full swing. The preceding months have been a period of steady progress and outstanding achievement emphasized, and made more striking, by the low level from which the forward movement began. Fundamental conditions not only have improved greatly, but the momentum of industry has been accelerated sharply.

"The extent of the industrial improvement in the first quarter of 1934 is shown in the movement of the Index of Industrial Activity during that period. The December Index figure was 71.6. In the three following months it advanced successively to 72.5, to 73.2, and finally, in March, to 79.3. The gain over the December level of activity was 10.8 per cent.

"This is the most impressive first-quarter activity increase recorded in any recent year.

"A continuance of the expansion of the volume of industrial sales also was a feature of the first three months of the year. For the first time in a number of years, the sales of each one of the 25 industries charted was higher than in the corresponding quarter of the year before. In the third quarter of 1933, the sales averages of 16 of the 25 industries were over 100 per cent. In the fourth quarter 100 per cent or more was shown by 23 of the 25. Among the most outstanding gains were those of steel, automotive, chemical, and household products industries.

"First-quarter wage increases were of striking proportions, manufacturing pay rolls in February reaching a new high in a gain of 12 per cent over the January figures, restoring a peak untouched since early in 1931, and making the greatest one-month improvement in fifteen years. The increases affected workers practically in all industries and applied both to salary and to wage earners. The average increase in wage scales was slightly greater than the average increase in salary scales.

"The gains in employment in the first quarter of 1934 were equally as impressive as the wage increases. The average total of unemployed in the period was a little more than 8,000,000, whereas the total for the corresponding period of 1933 was over 13,000,000. The decrease in unemployment shown by these two totals is nearly 39 per cent.

"The same totals, on the basis of 50,000,000 normally gainfully employed, show a gain in employment of 14.2 per cent."

MARCH NEWSPRINT STATISTICS

Production of newsprint in Canada during March, 1934, amounted to 210,129 tons and shipments to 207,197 tons, according to the Newsprint Service Bureau. Production in the United States was 84,993 tons and shipments 87,987 tons, making a total United States and Canadian newsprint production of 295,122 tons and shipments of 295,184 tons. During March 24,778 tons of news print were made in Newfoundland and 1,287 tons in Mexico, so that the total North American production for the month amounted to 321,187 tons.

The Canadian mills produced 171,375 tons more in the first three months of 1934 than in the first three months of 1933, which was an increase of 43 per cent. The output in the United States was 22,840 tons or 10 per cent more than for the first three months of 933, in Newfoundland 11,231 tons or 18 per cent more, and in Mexico 27 tons less, making a net increase of 205,419 tons, or 30 per cent.

Stocks of newsprint paper at Canadian mills are figured at 42,973 tons at the end of March and at United States mills 18,630 tons, making a combined total of 61,603 tons compared with 61,665 tons on February 28, 1934. The small increase in stocks during the first quarter of 1934 was due chiefly to accumulation of tonnage to be shipped later by water.

Program for Superintendents' Meeting

A tentative outline of the program of the fifteenth annual convention of the American Pulp and Paper Mill Superintendents' Association, merely gives a glimpse of the good time in store for all who attend the big event at Poland Spring House, South Poland, Me., on June 20, 21 and 22, next. Recent changes in the tentative program by K. E. Terry, Convention Chairman, and his corps of sub-chairmen indicate that no business sessions or group meetings will be held in the evening. This leaves the evenings on all three days clear for entertainment.

And no program, not even the official program, will contain a hint of the several splendid "surprise" features that will be sprung during the convention. In addition, Mr. Terry has prepared an informal program for Tuesday, June 19, a day on which many members and guests will arrive. This program will include the showing of moving pictures on fishing and hunting in the State of Maine and throughout the showing of these action pictures a famous hunting and fishing guide of Maine will explain the various scenes. Throughout convention week veteran fishing and hunting guides will be on hand to accommodate those who wish to try their hand and rods in the streams and lakes surrounding Poland Spring.

More than half of the spaces for exhibition of equipment and machinery at Poland Spring House have been sold at this early date, and it is advisable that all machinery and equipment concerns who wish to secure exhibition space send in their reservation soon. It will be noted on the program that definite time has been allotted on Wednesday afternoon and on Thursday morning and afternoon for examination of the equipment and machinery exhibited. However, the exhibition booths are in such a splendid spot that nobody attending the convention can possibly miss seeing them. All the exhibition rooms are in the big corridor which connects the main lobby of Poland Spring House and the main assembly room.

There will be a Costume Dance Party on Thursday evening at the end of which prizes will be presented to the ladies and gentlemen who are voted to be the most novel or the funniest. There will be special entertainment before and after the dance. Throughout the convention a ten-piece modern orchestra will be on hand to entertain.

For the golfers it is well to mention that the splendid 18-hole course is part of the property surrounding the Poland Spring House. The first tee is immediately outside the locker rooms in the basement of the hotel and the 18th hole is directly in front of the hotel.

Reservations for this convention are coming in rapidly. It would be wise for all who plan to attend to send in their reservations without delay. George W. Craigie, executive secretary, Box No. 36, Cumberland Mills, Maine, stands ready to answer all questions regarding hotel reservations, transportation, special trips, golf, other sports and machinery and equipment exhibition spaces.

Finnish Paper Market Improves

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., April 18, 1934.—The Finnish market for printing papers has shown some improvement during recent weeks, says a report to the Department of Commerce. Inquiries for newsprint are reported to be coming in in greater number with buyers evincing more interest in closing contracts. The market for thin printings has also shown some revival.

The report states that the market for wood pulp in Finland does not show much change. The chemical pulp market continues steady, despite some advance in prices.

J. G. Kline Leaves Miamisburg Paper Co.

[FROM OUR REGULAR CORRESPONDENT]

DAYTON, Ohio, April 16, 1934.—John G. Kline has retired as an official and director of the Miamisburg Paper Company, Miamisburg, 10 miles south of this city. Mr. Kline who served continuously for 39 years, first became associated with the company in 1895, when he assumed charge of the office. Five years later he was named secretary of the company and became a member of its board of directors. In addition to these duties he was made general manager of the plant in 1913, in which capacity he has served until his recent resignation, now effective.

Mr. Kline's duties as secretary and manager have been assumed by C. F. Nelson, who has been associated with the American Envelope Company of West Carrollton as auditor, for the past three years.

Mr. Kline, a native of the community, was graduated from the Miamisburg schools and later attended business college in Dayton. He has been active in local business circles and civic organizations. He will continue to serve as vice-president and director of the Farmers' and Merchants' Bank, and as a director of the Miamisburg Building and Loan Association. For a number of years he served as a member of the Board of Education of Miamisburg.

Mr. Kline gave as his reason for relinquishing his post with the paper concern the fact that his duties had kept him close to his office for nearly 40 years; that he could at no time yield the responsibilities without resigning and that he had considered this the best step to take under the circumstances.

It will be his intention to make up for lost opportunities in travel and the enjoyment of leisure. While his relation with the Miamisburg Paper Company were always pleasant, he found that at no time could he absent himself from his work and feel satisfied.

The Kline home on Buckeye street, Miamisburg, has been closed temporarily and the Klines have come to Dayton to reside at the Gibbons hotel, Third and Ludlow streets. They are mapping out a travel tour and are planning for the future with the enthusiasm of a couple of honeymooners.

Pulp Imports at High Level in Japan

Imports of wood pulp into Japan reached a new high level during 1933, receipts for the first eleven months amounting to 163,937 tons compared with the previous high record of 113,308 tons established during 1932. Although the consumption of pulp by the paper trade during 1933 was probably heavier than ever before, the paper manufacturers produced 88 per cent of their pulp requirements and the remainder was purchased from both domestic pulp manufacturers and importers of foreign pulp. The great gain in imports of foreign wood pulp, may be attributed almost entirely to the demand for this product from Japan's growing rayon industry. Despite the increased output of rayon during 1933, which was approximately 89,000,000 pounds, the actual amount of pulp required to produce this quantity of rayon is estimated to be about 55,000 tons. It appears, therefore, that unless large stocks of foreign wood pulp were stored in warehouses at the end of the year, that a considerable amount of imported pulp has been used for experimental purposes in connection with trial runs of rayon and other artificial fibers, or for other uses which are not generally known. The transparent wrapping paper industry, which greatly expanded during 1933, has no doubt consumed a considerable amount of foreign pulp, as the domestic product is not suitable for the manufacture of this type of product.

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Pulp and Paper Industry Literature Review

Abstracts of Articles and Patents Compiled by the Abstracts and Bibliography Committee of the Technical Association of the Pulp and Paper Industry, A. Papineau-Couture, John F. Ohlson, C. E. Peterson and Clarence J. West, Chairman

Copies of United States Patents can be obtained from the United States Patent Office, Washington, D. C., for 10 cents each. Send currency, not stamps.

Cellulose and Lignin

Addition Compounds of Cellulose. Georges Champetier. Ann. Chim. 20: 5-96 ((1933).—X-ray diffraction diagrams were used to study the addition compounds of cellulose with caustic soda, acids and water. The compounds $2C_6H_{10}O_5$. and $C_6H_{10}O_5.NaOH_3$ and the probable existence of two others, $3C_6H_{10}O_5.2NaOH$ and $4C_6H_{10}O_5.3NaOH$, were found. With systems of cellulose-water-sodium bisulphite and cellulose-water-pyridine, ordinary cellulose formed the hydrate $2C_6H_{10}O_5.H_2O$ and mercerized cellulose, $C_6H_{10}O_5.H_2O$. The rate of formation depends on the origin and crystalline nature of the cellulose. Acetic and formic acids were fixed only in very small amounts from their aqueous solutions, but aqueous phosphoric acid solution formed the addition compound $3C_6H_{10}O_5.H_3PO_4$. The X-ray diagrams indicated that the deformation of the network was caused mainly by imbibition; but the existence of a molecular combination in all cases was neither proved nor disproved. The formulas of the addition compounds are in accord with the scheme of the cellulose chain given by Haworth. —A. P.-C.

Hygroscopic Moisture of Cellulose. XII. Determination of Hygroscopic Moisture of Various Cellulose Products. Sutezo Oguri. J. Soc. Chem. Ind. Japan 36, Supp. Binding: 504-506 (1933).—The moisture contents of various samples of cellulose were determined. Their hygroscopic capacity decreased in the following order: viscose film, cupro-silk, Tomatex, Celotex, esparto pulp, straw pulp and parchment paper, Japanese paper, soda pulp and acetate rayon.—A. P.-C.

Unit Cell of Cellulose in Cotton Stalks and Cusps. J. P. Sanders and F. K. Cameron. Ind. Eng. Chem. 25: 1371-1373 (Dec. 1933).—The cellulose of cotton stalks and cotton cusps is shown to be the same cellulose found in cotton lint, spruce, pine and poplar. The unit cell or fundamental structure obtained by a chemical treatment is the same irrespective of the origin of the cellulose. Differences in physical properties of products from celluloses of different origins are to be sought in micelle or fibroid structures, which are being investigated.—A. P.-C.

Action of Potassium Permanganate Solution of Graded Hydrogen-Ion Concentration on Cotton Cellulose. C. Doree and A. C. Healey. J. Soc. Dyers Colourists 49: 290-295 (1933).—Against purified cotton calico, 0.04 *N* potassium permanganate solutions exhibit their maximum stability and minimum deteriorating effect at a pH of 9. The type of degradation products formed changes at this value. On the acid side the oxycelluloses produced are of the reducing type. On the alkaline side of pH9, permanganate yields products of the methylene blue absorption type, unless ammonia is present, in which case the oxycellulose is of the reducing type.—A. P.-C.

Analysis of Alpha-Cellulose. W. M. Billing. Plastic Products 9: 277 (1933).—A description of the technic of the determination of alpho-cellulose.—A. P.-C.

X-Ray Investigation of Parchment and Pergamyn. Ichiro Sakurada and Keiroku Hutino. Cellulose Ind. (Tokyo) 9: 110-115 (1933).—The X-ray diagram of unsized parchment which is treated with 58° Baumé sulphuric acid is almost the same as that of natural cellulose; there is no indication of the presence of cellulose hydrate. Cotton paper treated with 58° Baumé sulphuric acid at 0° for 1 hour gives the diagram of cellulose hydrate. It is therefore believed that the action of sulphuric acid in industrial parchmentization is limited merely to the micellar surface for the very short time of reaction. Pergamyn shows the ring-fiber structure; the supposition of an irregular micellar arrangement in pergamyn is thus proved faulty. In these specimens, the effect of direction is observed.—A. P.-C.

Studies On Lignin. X. Identity and Structure of Spruce Lignins Prepared by Different Method. Fritz Brauns and Harold Hibbert. J. Am. Chem. Soc. 55: 4720-4727 (Nov. 1933).—Lignin was isolated from spruce meal by the following methods and carefully purified in each case: (a) action of glycol and hydrochloric acid, (b) use of methyl alcohol and hydrochloric acid, (c) extraction with phenol and hydrochloric, (d) Willstätter method, (e) Freudenberg method. Well-characterized derivatives of each type of lignin were prepared by methylation and acylation, respectively. The building unit representing *native lignin* present in spruce wood has the empirical formula $C_{42}H_{32}O_6(OH)_5(OCH_3)_5$. Of the five free OH groups at least three are aliphatic in character, one of the remainder is of an acidic type (either phenolic or enolic),

and the fifth differs markedly from the others and is characterized by its reactivity toward alkylating reagents. —A. P.-C.

Mechanical Process

Effect of Different-Sized Fibers on the Physical Properties of Groundwood Pulp. E. R. Schafer and Matti Santaholma. Paper Trade J. 97, No. 19: 40-45 (Nov. 9, 1933).—A study of the strength and suspension properties of groundwoods in relation to the dimensions of the fibers, carried out by recombining the screen fractions in various proportions, showed that the average fiber length is related in a general way to nearly all the usual strength and suspension properties, thus permitting of the employment of screen analysis as an aid in evaluating pulp quality.—A. P.-C.

Chemical Properties of Screen Fractions of Black Gum and Slash Pine Groundwood Pulps. E. R. Schafer and Matti Santaholma. Paper Trade J. 97, No. 10: 46-47 (Nov. 9, 1933).—The lignin content and the solubility in 1 per cent caustic soda varied from fraction to fraction, being higher in the finer fractions than in the coarser. —A. P.-C.

Pulping Process. Arne J. A. Asplund. Brit. pat. 393,159 (June 1, 1933).—Wood is heated to above 100°C. and defibered by mechanical treatment, *e.g.*, in kollergangs, ball or rod mills, or described apparatus, at such temperature in the presence of moisture without facilitating defibration by extended digestion. The process may be carried out with the addition of alkalies or sulphur compounds, or the material may be digested after defibration. —A. P.-C.

Binding Material for the Manufacture of Artificial Grind Stones. Riku Korpela, Helsingfors. Finn. pat. 14,963 (Aug. 12, 1929).—The binding material contains 50 to 69 per cent by volume of magnesite or also dolomite or another material containing magnesium carbonate and 31 to 50 per cent by volume of cement, and to this is added 25 to 33 per cent by volume of sand. Water or sodium silicate is used to keep the mass moist while the material is setting.—J. F. O.

Pulp Grinder with Screen from which the Coarse Material Separated Out is Returned to the Grinder. Escher Wyss Maschinenfabrik G.m.b.H. Ravensburg. Ger. pat. 585,715 (Sept. 11, 1932).—Till the event of this pulp grinder it has been practically impossible to return the coarser fiber to the stone and have it properly ground. The object of this patent is to make this possible.—J. F. O.

Arrangement for Cleaning the Grind Stones in Pulp Wood Grinders. Walter Taubrich, Murgtal. Ger. pat. 582,354 (April 9, 1932).—J. F. O.

Arrangement on Multiple Press Pulp Wood Grinders. R. E. Wagner, Karlstad. Swed. pat. 77,429 (Sept. 5, 1931). —J. F. O.

Method for Increasing the Grinding Effect of Pulp Grinding Stones. Rudolf Steinmetz, Steyrermuhl. Aust. pat. 134,130 (March 15, 1933).—The shaft for the grind stone is hollow and either fresh water or white water passing through the shaft is conducted throughout the stone, from the shaft to the outer edge, by means of a system of canals within the stone. In this way the stone is kept cool by the flow of water over the periphery as well as keeping the stone free of adhering fibers.—J. F. O.

Sulphite Process

Removing Turpentine, Etc., in Sulphite Cooking. Gustaf Haglund, assignor to Patentaktiebolaget Grondal-Ramén. U. S. pat. 1,922,160 (Aug. 15, 1933).—Wood chips are cooked in a digester with a solution of a sulphurous acid salt, vapors containing turpentine, etc., are withdrawn from the digester, a solution of sulphur dioxide is added to the digester, and the cooking is continued. —A. P.-C.

Combined Acid and Alkali Process of Fibre Liberation. George A. Richter, assignor to Brown Co. U. S. pat. 1,917,545 (July 11, 1933).—Wood is cooked in a sulphurous acid solution containing added free sulphuric acid short of effecting fiber liberation into a pulp, and is then cooked in an alkaline cooking liquor to complete the fiber liberation.—A. P.-C.

Pulping Process. Roger W. Richardson, assignor to Canadian Industries, Ltd. Can. pat. 335,222 (Aug. 29, 1933).—Pulp is produced by circulating a dilute aqueous solution of ammonia over wood chips in the proportion of solution to chips of 5:1 by weight, for about 45 min. at 100° to 110°C. The ammonia solution is removed without reduction of pressure. About 2 parts by weight of a relatively more dilute aqueous solution of ammonia per part of wood chips is circulated over the chips for 15 min. at 70°C. All but about 0.85 part of the solution is removed and the chips are cooked with 4.4 parts of a 5.5 per cent sulphurous acid solution.—A. P.-C.

Liquor for Pulping Wood Chips. George A. Richter, assignor to Brown Co. U. S. pat. 1,915,953 (June 27, 1933).—A fresh sodium sulphite solution is treated with niter cake to convert only a portion of the sodium sulphite into sodium bisulphite, to produce a cooking liquor containing free and combined sulphur dioxide and sodium sulphate.—A. P.-C.

Wood Pulping Process. Frederick C. Hahn and Robert E. Fothergill, assignors to E. I. Du Pont de Nemours & Co. U. S. pat. 1,926,002 (Sept. 5, 1933).—Wood is digested with an ammonium bisulphite solution of a pH of about 1.0 to 1.7 and an ammonia concentration of about 0.5 to 1.0 per cent.—A. P.-C.

Sulphite Pulping Process. Ernst Hochberger, assignor to The Canadian International Paper Co. Can pat. 334,891 (Aug. 15, 1933).—Wood chips are worked in the usual manner for 5 to 11 hours until a temperature of 120° to 155°C. is reached. The liquor is drained off without substantial lowering of temperature and pressure. A second-stage cooking liquor preheated to the transfer temperature is forced into the digester. The liquor has a higher relative acidity than the first-stage liquor and preferably has a lower concentration of total sulphur dioxide. Cooking is continued until the fiber is completely liberated. The pressure is kept constant at 75 lbs. per sq. in. The temperature is raised gradually from the transfer temperature to 145° to 155°C., which is reached in from 3 to 6 hours.—A. P.-C.

Digestion of Wood Chips. Hervey G. Cram, assignor to Main Seaboard Paper Co. U. S. pat. 1,918,181 (July 11, 1933).—A digester containing the charge of chips is completely filled with acid cooking liquor under a pressure at least approximating the desired cooking pressure and the steam is introduced to effect cooking while substantially maintaining the pressure.—A. P.-C.

Wood Pulping Process. Lemuel B. Decker. U. S. pat. 1,921,966 (Aug. 8, 1933).—Wood in log or block form is immersed in a sulphite liquor and treated in the liquor at an approximately uniform temperature (which may be about 90 to 110°C.) for a sufficient time to effectively impregnate the wood, and is then ground.—A. P.-C.

Effect of Sulphur Dioxide Gas on Alloys. G. H. McGregor and J. W. Stevens. Paper Trade J. 97, No. 18: 40-41 (Nov. 2, 1933).—Results are given and discussed of the exposure of 50 samples of ferrous and non-ferrous alloys at 200° to 220°C. in sulphur dioxide of 17 to 18 per cent concentration.—A. P.-C.

Standardization in the Paper Industry*

By Charles W. Boyce[1]

When the paper industry settled down to the job of formulating a code, few realized how far-reaching the code would be. We thought in terms of hours and labor, wages and of price filing. After three months of code-governed operation we know that much more is involved, that the code, simple as it may be, will encompass in some way every one of the complexities that make up our industry.

For instance, price filing seemed at first a simple clerical job, and that conformity to the price schedule would be assured by the manufacturer's allegiance to the code and by his desire to merit the respect of his competitors. That was before we began to file prices. Immediately after and subsequently since, we have been busy trying to find out what the prices mean. In many instances they constitute a series of figures accurately computed and scientifically balanced with explicitly adjusted differentials for any number of services and styles, and little more. Exactly what these figures represent is vaguely mysterious.

The Book and Writing Paper Divisions first undertook to find out what was wrong. Other major divisions followed. Today there is little doubt in any division of the need for definition and classification of paper grades.

Together with other major industries, the paper industry has dabbled in standardization movements of one kind or another during the past two decades. Through a long-drawn out process of trial and error methods, the industry has agreed upon standard sizes. During the last six months of concentrated meeting and re-meeting, many aspects of business procedure have been subjected to study and the results when approved by the Administrator, will be standards.

But the industry has never undertaken a study of its products upon an apropriate scale. Until this is accomplished, until all processes of a scientifically balanced standardization program has been completed, the exact nature of paper must remain a subject for speculation and for sales argument.

I do not propose to expose my feeble ideas concerning standardization and I shall not attempt to outline a procedure of determination. I do wish, however, to emphasize certain aspects of such a procedure that to my mind are immediately important.

Need to Delineate Principles of Standardization

The pulp and paper industry is composed of three major code jurisdictions, under one of which there are twenty-four (24) separate divisions. We are immediately concerned with the problems of the latter. Their products range from the thinnest to the heaviest sheets; they range from the cheapest to the most expensive papers, all of which are grouped together in divisions between which the lines of demarcation are but vaguely clear. Papers used for writing purposes, for instance, are found in modified forms in several divisions, although the paper may not be designated as writing paper. Printing papers as a group fall under different Divisions, and the papers for mechanical uses are equally separated. Obviously, the Divisions themselves are tied closely together by grade affiliations, by the overlapping of manufacture to such an extent that any major circumstance or condition which affects one Division may be transmitted to all Divisions. Under such circumstances the programs of the Divisions must be harmonized and they must be formulated in accordance with identical principles. The industry can not afford to permit at this critical time divergence from a central set of principles.

In the past standards have depended largely upon the merits of long established brands to which other papers were loosely compared for the purpose of value determination. Upon careful laboratory investigation, many of these brands have been found to be lacking one or more characteristics of a number one paper. In fact, we lack even rough approximations of standards.

Obviously, the first step is the delineation of the principles of standardization. I hope that as a result of this meeting and of the study of appropriate committees immediately following, that an authoritative statement as to the principles of sandardization may be issued in the immediate future.

An important principle has to do with the basis of standardization. Certainly the conditions of use determine the suitability of paper. The requirements of such use, then, measured in terms of paper characteristics define the paper. On the other hand, it is probable that the ordinary paper user is little concerned with the materials used in paper manufacture, or the method of the manufacture, or many other supposedly important determinants of paper characteristics if a given sheet sufficiently and cheaply serves his purpose. Nor is he particularly impressed with the so-called "art of paper-making", the employment of which transcends the realms of any reasonable art save the one known as mass production.

But we are accustomed to define our papers in terms of materials used in their manufacture; groundwood book, kraft wrapping and a host of other names are common. Perhaps materials did furnish a clue to the character of the sheet years ago; but in today's highly specialized manufacture and technical development, materials are becoming constantly less important as quality determinants.

An important part of this study has to do with the technique and the apparatus to be used in determining the physical properties of paper. The industry has been lax in fundamental studies in these fields. So, too, have our publicly supported research institutions. In fact, satisfactory apparatus and the knowledge of testing technique is distinctly limited. It begins to be clear that we are undertaking a man-sized job.

Difficulties Anticipated

The translation of test results into definite grade standards is in itself no insignificant aspect of this study. In it are involved questions of policy which may deter the establishment of satisfactory grade standards. No doubt conflict will arise and I can well imagine that the Central Grading Committee, the appointment of which was recently authorized by the Paper Industry Authority, will find itself not the least busy of the many committees that the code has called into being.

I believe that the standardization of paper grades ranks among the most difficult standardization jobs in American industry. We are dealing with more than 10,000 variables, which singly or in combination may have wide influences. We are dealing with perhaps as many different kinds of paper, many of which although apparently similar in ap-

* Presented at the joint meeting of the Technical Association of the Pulp and Paper Industry and the American Paper and Pulp Association, New York, N. Y., Feb. 19, 1934.

[1] Executive Secretary, American Paper and Pulp Association.

pearance, are varied in some minute detail to adapt them for a specific purpose. Under such circumstances the literal application of scientific method might easily arrive at a system of standards which in themselves would be altogether too complicated for commercial application. It is important, therefore, that in the pursuit of any standardization program that tollerances, variations from the standard in any one of the numerable characteristics of a sheet of paper, are carefully determined.

Perhaps this program can be facilitated if it is approached from two points of view, the one, an outline procedure, if it may be so designated, that will give information within a relatively short time upon which broad standards may be set up for the purpose of price filing; the second, a careful scientific study, which in its attention to detail and to the development of technique and equipment, will add progressively to the outline procedure more complete knowledge as rapidly as the industry is prepared to absorb it.

The most important aspect of this whole program is one that may not properly be emphasized at this meeting. It is the need for adequate financing. The standardization problem appears to me to be as important and far-reaching as any in the industry. No adequate job can be done if sufficient funds are not available. It is important that the Executive Authorities of the Divisions realize this from the beginning and that they take the necessary steps to provide whatever funds may be required by their Grading Committees and by other committees that may be engaged in the establishment of standards and in the development and the improvement of technique and equipment. This job once well done will simplify the marketing problem of the industry. It is, perhaps, the best investment the industry can make in extending the use of paper.

Paper Standards and the Importer*

By Warren B. Bullock[1]

It is the basic province of the Import Committee of the American Paper Industry to cooperate with the Customs Officials in the prevention of misclassification, undervaluation or dumping of foreign paper by making available to those officials the best marketing, technical and legal facilities of the industry.

The Tariff Act of 1930, under which duties on foreign merchandise are now being collected, provides for approximately 170 different types of paper. When the customs officials face the question of what duty to apply to an importation of paper, they must have knowledge of the accepted name of such paper, its commercial designation in the trade and commerce of this country.

The first question that a customs official must ask in deciding what rate of duty is to be levied is, "What kind of paper is it?

It is readily understood that as to the great bulk of importations, the classification of the paper is comparatively simple. A wrapping paper is dutiable at one rate, a writing at another. But when a customs official is faced with the determination of a paper which is so close to the border line between two grades that the importer may claim it to be something which it is not, then that official must have some yardstick of classification by which to classify the paper.

A simple instance would be the determination of the duty classification into which a hard sized paper might fall. The paper in question may be a hard sized book paper, or it may be a writing paper. How is the customs officer to determine which is the proper classification? Writing paper is dutiable at 3 cents per pound and 15 per cent, book paper at ¼ cent per pound and 10 per cent. It would be a certainty in such a case that the importer would enter his paper as printing paper, and he has the right to do so. If he is wrong, the customs officials must know the proper classification, and the importer can protest to the United States Customs Court against the ruling of the appraising officer. The court must decide whether the paper was properly classified or not, and there must be evidence taken both for the Government and for the importer to determine whether this hypothetical paper is a book or a writing paper.

We of the Import Committee whose daily duty it is to cooperate with the customs officials in the proper determination of such questions believe it would be of the greatest value in the enforcement of existing tariff laws, to have clear, well understood, and commercially recognized definitions of the various best known grades of paper. We follow the procedure of giving the customs officials our best opinion, secured from the industry, as to questions, for we feel that our greatest value to the industry is in securing recognition from the customs officials of our wish to be fair and correct.

Our task would be greatly simplified, as would that of the customs officials, if there were definitions of various grades of paper, so phrased that they could be used by those officials in the analysis of a shipment of any foreign paper.

There is a definite example of this in the case of the definition of standard newsprint. The definition which is now used as a guide by customs officials was prepared by the Treasury Department, and the Customs Courts have held that standard newsprint paper, which is on the free list, is paper which is chiefly used for the publication of newspapers. The definition is used as a guide for determining the classification of a shipment of paper, but because of the court's qualification of standard newsprint as that paper chiefly used by newspapers, is a guide only.

If a definition of standard newsprint were promulgated by the paper industry, generally recognized as a commercial description of paper known as standard newsprint, the Customs Courts would be forced to approve the classification of paper conforming to that definition as standard newsprint, and exclude from that classification all other papers.

If throughout the field of paper, the industry should set up such a series of definitions, make them official, the result would be to eliminate many of the questions now being carried to the courts for determination.

Such a series of definitions would not meet all the requirements of tariff practice, and probably not of commercial practice. However, we feel that the establishment of a series of standard classifications would be of great value, and while the border line papers would always involve a difference of opinion as to classification, many existing evils would be avoided by a further advance toward more specific definition and standardization of paper and the grades within which they fall.

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Work of the Writing Paper Association Grading Committee*

By Maxamillian Krimmel[1]

At the present time the Sulphite Bond Grading Committee is the only body in the Writing Paper Manufacturers Association working on classification and standardization of papers. Therefore in presenting this talk on the work of the Writing Paper Manufacturers Association I shall confine my remarks to the origin, purpose, activities, accomplishments and plans of the future of this committee, speaking as a representative of it and not necessarily expressing my personal opinions on the subject of Paper Classification and Standards.

The Sulphite Bond Grading Committee was authorized by the Sulphite Bond Division of the Writing Paper Manufacturers Association to grade sulphite bonds, ledgers and writings according to the clasification outlined by the Division if possible to do so, and if not, to recommend revisions so that grades could be definitely defined and the papers classified accordingly. This committee is composed of representatives of the manufacturing, technical and sales fields in order to cover all viewpoints but it lacks a very essential factor in standardization, namely consumer representation.

Under the circumstances the problem of grading, classifying, standardizing and specifying could not be approached in the strictly scientific and fundamental manner of considering use requirements, determining what properties were essential for the requirements, measuring the properties and basing the standards of quality or specifications on these factors.

We have been operating under the Code of Fair Competition since November 27, 1933, and this code makes a definition of grades essential and immediately necessary. Therefore, the committee felt that it was desirable to approach the problem from the practical side in order to meet the requirements of the day, well knowing that the best that could be done under the circumstances might not be perfect.

Nevertheless in spite of the facts that, because of the preponderance of art over science in papermaking, paper quality is difficult to standardize; that past attempts at standardization have not yielded good results; and that the grading of sulphite papers was regarded by many as an impossibility; the committee looked upon it as a tremendous responsibility and yet a wonderful opportunity to render a real service to the industry.

At its first meeting the committee dedicated itself to the problem of defining grades and classifying sulphite bonds, ledgers, and writings consistent with price differentials and to meet code and trade requirements. This became the main objective.

Quality of Paper Rather than Fiber Content

The present grade classification which was drawn up to meet an emergency was considered inadequate. By a unanimous vote it was decided to define grades in terms of quality rather than by fiber content or furnish and to confine the definition to a few simple factors, if possible.

In order to determine what factors could and should be used the results of tests made by The Institute of Paper Chemistry at Appleton, Wis., on 30 watermarked bonds, 63 unwatermarked bonds, 19 watermarked ledgers, and 38 unwatermarked ledgers submitted by 47 mills through the Association were carefully studied.

These tests included the determination of brightness, formation, folding endurance, tearing resistance, bursting strength, tensile strength, glare, dirt content and sizing quality. Other properties considered which are not measurable by any approved or well recognized method at present were color, cleanliness, writing quality, "rattle," and surface characteristics.

Paper Brightness

Also considered and of very great assistance were the results of tests on book papers made at the Institute and in Laboratories of mills in the Book Division. The information was made available through the chairman and two members of the Book Grading Committee who are members also of the Sulphite Bond Grading Committee. The members of the latter were very much impressed with the measurement of brightness introduced by the former and with the temporary definition of grades of book papers in terms of brightness and formation after 37 items had been considered.

When upon analysis of all available data, it was found that the methods for testing some properties are limited, that the test values for some properties fall within narrow limits, that the measurement of some properties had no real significance, and that there were no satisfactory methods for determining some desirable properties; the conclusion was reached that for the time being brightness and bursting strength were the only factors that could be employed.

Samples of paper representative of different degrees of brightness as measured by the instrument appeared to give the same effect of brightness upon visual inspection and grading. Slight differences in brightness were detected and accurately determined by the instrument. In all cases brightness appeared to be independent of hue and it was felt that here was an important property which could be accurately measured and used to differentiate between grades without interfering with shades of color established to satisfy trade preferences which are largely the result of personal opinion.

The results of bursting strength tests indicated that it would be possible to arrange the papers into distinct classes provided there were not a large number of grades. There was fairly good relation between bursting strength and factors such as folding endurance and tearing resistance, but poor relation between bursting strength and other factors. Nevertheless, up to the present time bursting strength appears to be the most satisfactory physical strength property that can be applied for the purpose of simple grading.

Thus the committee has defined the grades in terms of brightness and bursting strength and has recommended to the Sulphite Bond Division that the following classification be adopted, believing that it is more definite than the present classification and that it is a step forward in stand-

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ardization. Obviously, if later on, it seems advisable to add other factors, such factors will receive careful consideration.

Grade No. 1—may have a brightness above 80 and bursting strength above an average of 1.6 points per pound.

Grade No. 2—brightness shall not exceed 80. Bursting strength shall not exceed average of 1.6 points per pound.

Grade No. 3—brightness shall not exceed 77. Bursting strength shall not exceed average of 1.4 points per pound.

Grade No. 4—brightness shall not exceed 74. Bursting strength shall not exceed average of 1.2 points per pound.

A tolerance of .1 point per pound in bursting strength to 1.5 points in brightness is permissible but when this tolerance is applied on one factor a corresponding reduction must be applied on the other factor. The tolerance in bursting strength shall be limited to .1 point per pound increase or decrease with a corresponding adjustment of brightness (maximum 1.5 points increase or decrease.)

For instance, a paper has a bursting strength of 1.3 points per pound. It can classify as a No. 4 Bond only if the brightness is reduced 1.5 points to 72.5. Or if the brightness is 75.5, the paper can classify as a No. 4 Bond only if the bursting strength maximum average does not exceed 1.1 points per pound.

Since it is impossible at the present time to measure brightness of colored papers, bursting strength only will govern with .1 point per pound tolerance either way.

Testing Methods

Brightness shall be measured with the instrument developed jointly by Kimberly-Clark Corporation, Mead Corporation, The Institute of Paper Chemistry and The General Electric Company.

Bursting strength shall be measured by the Official Standard TAPPI Method, T403m.

Tests shall be made at a constant relative humidity of 65 per cent at 70 deg. F. Official Standard TAPPI Method T402m.

Samples for testing shall be taken according to the Official Standard TAPPI Method T400m.

To date all attention has been placed on bonds. Ledgers and writings will be considered at an early date in the order mentioned. But the most important and urgent problem before the committee is to find some additional factor or factors that can be used to define the grades. Suggestions of possible factors will be gratefully received. It is the intention of the committee after giving the matter further thought and as a result, determining what property or properties should be determined; to request an appropriation of funds from the Division for research on such a project. Obviously, consideration will be given also to revisions that may be necessary in the classification due to inequalities and difficulties that may arise upon practical application of the standards.

Specifications and the Paper Manufacturer*

By Ernst Mahler[1]

The paper manufacturer's viewpoint, probably in the minds of those whose duty it is to purchase paper to certain specifications, is considered contrary to their own. May I state that is not the case? I am expressing the point of view of the greater majority of paper manufacturers when I say they are not only in the most cooperative frame of mind towards the purchasers of their products, but that they are willing to the best of their ability, to conform to the specifications laid down by their customers. Purchasers of paper also have become technically minded just as the manufacturers themselves. The interest shown by our customers in instruments which measure qualities of paper, may I say, is even keener than the interest quite often displayed by the most technically minded paper manufacturer.

Our customers quite often have used instruments and methods in the writing of specifications and in the testing of their products, which have never been approved, or which, by later experience, have proven inadequate. The consequences therefrom are too obvious to discuss.

The paper manufacturer, because of this experience, is quite apprehensive, and rightfully so, because of his past experience when tests and specifications based on half-baked knowledge and misleading facts, were injected in the specifications, due to instruments not standardized, and testing methods even less standardized. The morgue is filled with the victims of these tragedies, and is becoming rapidly populated with the methods and the instruments. Nothing is more welcome to the paper manufacturer than standard instruments and methods of test that are fire-tested. This work is not the work of inexperienced people or people whose desires are bent to get pre-determined results.

With rising prices, it is only natural to expect that the purchaser will be more critical, and uniform high quality is paramount. Without standardized methods and instruments for testing, this uniform high quality cannot be maintained. The success of the industry depends entirely upon the service which is rendered its customers. Use requirements are quite often overshadowed by specifications of too highly a technical nature. I am not pleading for the abandonment of tests and methods but, on the contrary, for the refinement of them for the mutual benefit both of the purchaser and the manufacturer.

Haste and wishful thinking do not produce methods and instruments useful to the industry, to the purchaser, or to the ultimate consumer. To get results this work must be done by men who combine in their makeup both the practical and scientific point of view.

Nothing is more useful to the paper manufacturer than instruments and tests which will enable him to control his processes and thereby the end product, and eliminate that dangerous twilight zone where honest difference of opinion always works to the financial detriment of the exchequer of the paper mill.

The National Recovery Administration is bringing these problems of standardization to the foreground but caution must be the watchword. Haste must be made slowly; tolerance and a receptive mind on either side are of greatest necessity. Then definite progress and accomplishment are assured.

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[1] Member TAPPI, vice-president, Kimberly-Clark Corporation, Neenah, Wis.

The Paper Grading Problem of the Book Paper Industry*

By H. P. Carruth[1]

The grading of products manufactured by the mills composing the Book Paper Manufacturers' Association has been a gradual evolution over a period of many years, the method of grading being a composite of the type of use, the processes employed, and the raw materials from which the product is made. No central body was in existence until the middle of 1933 whose duty it was to attempt to clearly define these grades, but through accepted custom the major grades had come to have a fairly well recognized significance. During the depression, with its attendant stimulation of competition, the lines differentiating the grades—never clearly defined—became confused to an unprecedented degree. Mills composing the Book Paper Association had for many years lacked an association through which such matters might be clarified until the formation of the Book Paper Group in the fall of 1932. Under the impetus of the force set in motion by N.R.A. legislation, and with the medium of the Book Paper Association available, it was recognized about the middle of 1933 that an attempt to clarify the existing confusion was imperative, and to that end the Executive Committee of the Book Paper Association formed its Grading Committee. The personnel of this committee represents an attempt to bring together the very diverse interests involved.

No Precedence Upon Which to Proceed

There being no precedent upon which such a committee could proceed, it early became apparent that some system of classification would have to be adopted and the committee discussed at length various methods that might be applicable. Among these were considered grading by raw materials used, by processes employed, by costs and by use requirements. This consideration finally crystalized the conception that the use of the product was the dominating factor in grading, but that some consideration was necessary for the other factors involved. Samples of paper were secured from the various members, in several widely manufactured grades, and the committee set to work in an attempt to set up specifications which would permit classification within definite limitations. The most important papers were found to be those generally known as M.F. or English Finish Book. These papers are used for a wide variety of printing purposes, and in the aggregate represent a very large tonnage.

Three Classifications

It was the feeling of the committee that if standards could be set up that would classify this general group into three classifications—following the precedents of the industry, namely the lowest grade commonly known as Western Book, the intermediate grade commonly known as Eastern Book, and the highest grade manufactured by many mills but having no definite name, that a foundation would have been laid upon which the multitude of other products manufactured by the members of the Association could be built. This seemed particularly important as the Association had already built up a set of trade customs, in which this grade was largely used as a starting point from which differentials were calculated.

Appearance Related to Brightness

The committee felt, early in its studies, that it was most desirable to state specifications in terms of some form of instrumental test readings, as otherwise the question of personal judgment, with all the implications of the personal equation, was the only alternative. In the judgment of the committee appearance and printing qualities were the determining factors in establishing value for this group of products, and in consequence the committee sought instrumentalized methods of testing, which would cover substantially these requirements.

While there are many factors influencing a sheet of book paper, it was finally decided that brightness related most closely to the appearance value and, in consequence, after much laborious laboratory examination by those mills equipped to make the study, specifications for brightness were adopted. To achieve this, it was necessary to consolidate the work done by the different technicians of the industry who had specialized in this subject, and to design a new instrument embodying the experience of all. The importance of brightness as a measure of appearance and use value rests upon the fact that all of the paper making materials commonly included in a paper furnish are of a yellowish cast and their approach to perfect whiteness is directly related to cost. In addition, the degree of brightness is strikingly apparent when papers are compared visually and, except for isolated and unusual purposes, the brighter the paper the superior it is for most printing purposes.

Printing Qualities Measured

Printing quality cannot be defined by any one test. The committee recognized that surface characteristics, such as measured by the Bekk surface tester and the Ingersol glarimeter, were important, but felt that at this early stage in the development of grading, a single test for formation (which experience has shown to be of vital importance) would be sufficient at the start. Several of the mills represented on the committee had been using an empirical method of numerically expressing formation differences over considerable periods of time and found it a useful means of estimating printing quality. This test was, therefore, adopted and embodied in the specifications, with the reservation that a surface test might, and probably would, be required in the future, particularly on higher quality.

The committee felt that within the limits generally understood under the name of a "free sheet" reference to the raw materials used was not necessary, but it was accepted that groundwood or rag content must be considered as sufficient reason for additional grading standards. This, then, is the basis on which the three grades now adopted by the Book Paper Association have been established. They have been named "A," "B" and "C," grade "A" being the highest quality. At the present time it seems probable that it will be desirable to include in the "C" grade specification some reference to the use of unbleached sulphite, although at the moment this has not been adopted.

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[1] Member TAPPI, vice-president, The Mead Corporation, Chillicothe, Ohio

The committee recognized that as consideration is given to other grades of book paper and products included in the scope of the Book Paper Association, additional tests must be used, such as the various strength tests, opacity, etc.

Conclusion

In conclusion, it must be kept in mind that the establishment of grade specifications is essentially in a pioneering stage, that methods of testing are unsatisfactory and in many cases non-existant, that instrumentation requires much developing, and that because of such difficulties as these any specifications currently adopted should be considered as temporary and subject to such changes and amplifications as may, from time to time, become necessary or advisable. It should be kept in mind that the purpose of such classification is primarily a clarification of the understanding of the industry for practical use. Grading must never be of such a character as to prohibit the development of the industry or its ability to progress in tune with its consuming markets.

Paper Standards from the Point of View of the Institute of Paper Chemistry*

By Henry P. Wriston[1]

I shall speak very briefly about this topic from the point of view of the Institute of Paper Chemistry. That is justifiable for two reasons: First, the Institute has been in the midst of this as the agent of grading committees for some time now. Its interest is therefore not only scientific and theoretical, it is immediate and practical. Second, the Institute was founded and established to meet just this sort of issue. I do not mean to say that five years ago anyone foresaw the New Deal and the N.R.A., but I do mean, precisely, that a little group of men in the industry, conscious of the steady trend of pulp and paper making from art to science, determined to establish an institution which could serve the whole industry when and as that transition took on a critical character. They asked for nationwide support, but they did not wait for it; relatively a small group of mills furnished the backbone of the budget for five years. Due, therefore, to the vision and energy of a few pioneering minds among pulp and paper manufacturers, the sixth industry in point of size was the only industry with its own scientific institution devoted wholly to its interests. From the moment this present issue of classification and standards arose, the Institute has devoted a major share of its attention to this problem. It is prepared to continue to do so, not in any monopolistic or exclusive way, but in active cooperation with all the agencies, such as the Technical Association of the Pulp and Paper Industry which has made so many significant contributions in the past.

The Institute approaches this matter from three points of view. First of all, it is an educational institution, so chartered and devoted primarily to that purpose. So far as we know, it is unique in this respect; it is a graduate school preparing technical men for this one industry exclusively. A carefully chosen group of graduates of universities and colleges spend four more years in work and study upon the problems of pulp and paper. The equipment is unrivalled, the library is unexcelled, and the staff has grown until there are seventeen persons carrying on instruction and major research projects, in addition to the work done by technicians and by the students. At a moment like this, it is not necessary to argue the desirability of having carefully trained technical men. Every recent development makes technical competency more significant than ever before. To supply those in a free market is the primary function of the Institute.

Paper Properties to be Evaluated

In the second place, the Institute is a research institution, and, as such, has a very immediate and direct interest in this problem. Let me say at once that the staff of the Institute are under no illusion that the problem of standards is wholly a scientific problem. There are many other points of view. From the manufacturer's point of view, the paper must be *sold*. From the buyer's point of view, the use requirements are important. As one man expressed it, "Grades are fixations of buyers' values." The staff of the Institute recognize, therefore, that the grades and the basis for grades must be determined neither in a scientific institution nor even on a scientific basis, but by grading committees and their principals upon commercial considerations. That eliminates a very broad field of activity, but there is plenty of territory remaining. On the control envelope in use at the Institute, there are forty-two tests listed. They fall into two broad classifications, chemical and physical. The physical are divided into visual tests, mechanical tests, and tests by optical-electrical devices.

Some of these tests were designed primarily for control purposes in manufacture. Valuable as they may be from this standpoint, often they are not pertinent to the problem of grading. In control tests the object is standardization of process, so that the paper will be uniform. In code work, on the other hand, we are interested not so much in how the paper was produced, but its characteristics as a finished product. Two papers may be made on machines with entirely different mechanical equipment; one may be filled with talc and the other with clay; various other factors of processing may be different. Yet both papers may fall into the same class and be very near the same rating in that class. Tests, therefore, both appropriate and effective in control work, may be irrelevant in connection with the codes. The determination of valid tests of the finished product is a very large and complicated research problem, on which the Institute is already engaged.

Again, it is manifest that many of the bases upon which paper is sold have to do with character even more than quality. For this purpose various empirical tests were devised. Smoothness, for example, could be estimated by sliding a block over the paper laid on an inclined plane. In a single mill, and for its own purposes, such a device might serve a useful purpose; for such a situation as the present, it would manifestly be inadequate. Broadly speak-

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* Presented at the joint meeting of the Technical Association of the Pulp and Paper Industry and the American Paper and Pulp Association, New York, N. Y. Feb. 19, 1934.

[1] Director, Institute of Paper Chemistry and president, Lawrence College, Appleton, Wis.

ing, instruments to determine characteristics are inadequate. Instrument makers have done much in recent years, but much more is in process at the Institute and elsewhere.

To be significant, the tests must be capable of interpretation, and that is no easy task. Brightness, for example, is an important characteristic in many papers. Yet brightness appears to mean somewhat different things in different papers. In white papers, other factors being equal, brightness seems to be to some extent a function of color. Back of that very simple statement lies a technical, scientific, theoretical problem which harried the Institute staff for some time. In colored papers, brightness is sometimes judged on how high the reflectance curve rises at the particular color. That is quite a different thing.

This illustration serves to indicate the great problem of interpretation. As Doctor Kress so often asks, "Now you've got it, what does it mean?" It seems clear that in many cases the characteristic to be measured is not accurately defined, and that instruments designed to measure a defined characteristic may in reality measure something quite different. The definition of terms is a great problem. The development of instruments and the interpretation of their readings is another.

Problems of Instrumentation

Instrumentation involves another tremendous problem. It will no longer be adequate to have an instrument consistent with itself; it must also be calibrated with other instruments in many other laboratories. The same piece of paper should give the same readings wherever it is tested. That is a tremendous order. Moreover, it must be done upon an ever more and more accurate basis. "Experimental error" must be very small indeed. It is already clear that manufacturers will crowd the upper boundaries of their respective grades. This makes the problem of instrumentation, techniques, and calibration infinitely more difficult. The combination of delicacy, accuracy and sturdiness is a large order. Moreover, instruments, by their very nature, are subject to worn parts, changing clearances in bearings, broken wires, burned out lights, etc. The problem of maintaining precise calibration is therefore one which requires not only eternal vigilance but very careful techniques.

Many present tests involve subjective judgments. Many of the instruments, even, require individual differentiations which may vary greatly from person to person. For example, whenever the results of a test depend upon matching two fields of light by the human eye, there is more likelihood of variations in readings among different operators when the result depends upon something like weighing on a beam balance. Indeed, with one operator, the element of fatigue often offsets experience and skill. The problem of the simplification of reading results, therefore, is a vital one. The instruments which are difficult to check and read must be developed to simpler, more positive, and more objective differentiations.

These problems are further complicated by the characteristics of paper itself. Some qualities of paper are fugitive—the color of cheaper grades of groundwood, for example. Other characteristics vary within a single sheet. The pop test and the folding test are common illustrations. These difficulties are now amiably buried in the shallow grave of averages. But an average is crude even as a statistical device. Ways and means should be found to test more reliably and by statistical methods more accurate and revealing.

Grading Committee Test Procedure

Defining the characteristics accurately, standardizing techniques, adequate instrumentation (sturdy, easily read, easily interpreted, easily calibrated) these are scientific tasks which will absorb enormous energy. The industry as a whole should make this an objective. Money spent in this achievement would be money saved.

Official Testing Station

The third function of the Institute is as the official testing station for many grades. I want to make it clear that the Institute did not establish grades, and did not even suggest specifications to establish grades. We did only the testing specified by grading committees, and offered no opinions whatever. All specifications for grade limitations have been made by the respective grading committees, who use the data they requested from us as background for their decisions.

In the exigency of the task, we have not had much energy for keeping interesting but not immediately necessary statistics; but between eighty thousand and one hundred thousand tests have already been made in connection with code work. Certain principles govern that work. First of all, it is approached with perfect detachment. The staff do not want to know where the sample comes from. We prefer to receive it from the grading committee or other appropriate central agency, marked with some code number known only to that agency and not capable of interpretation by the Institute. The less we know of the specific origin and case history of a piece of paper the better we like it.

When received, the sample is entered upon a day-book and then an Institute number is substituted for the code number. The tests to be made are indicated upon the envelope which is then sent to the testing departments. No member of the technical staff sees the correspondence, if any, relating to the samples. No member of the technical staff sees even the original code number. He sees only the paper with its Institute number and the check lists of the tests which are to be made. He enters the time and his initials upon receiving the envelope container, again when the testing is completed and again when the envelope is returned. Another test operator receives an identical envelope with samples of the same paper which he proceeds to test. Each test is thus made twice by two men working wholly independently, neither of whom has access to the data sheets of the other. The chief of each testing section compares the two sets of tests and when there is deviation beyond tolerance the papers are sent back again, without being identified as repeaters, and new tests are run. Results from both operators which include readings, date and time, together with all the samples and remainders are made matters of record and preservation. Humidity and temperature record charts are kept on file. The calibration of all instruments is regularly checked, and the results recorded and filed. By requiring two independent tests by two different operators and retests when necessary, we have done our best to eliminate the personal factor.

When all the tests are completed, the statistical division makes permanent record of the results, and prepares such tables, charts, and graphs as may be desirable, and sends them to the responsible agency.

No One Makes Profit from the Work

In closing, I ought to emphasize that no one makes a dollar out of this work. If the income of this division of our work exceeds its outgo, any balance will go directly into training young men for the industry and into research for its benefit.

Development and Use of Quality Standards*

By Lyman J. Briggs[1]

A standard of quality, in its simplest practical aspects, is an understanding between a producer and a consumer regarding the service characteristics of the commodity about to change hands. As such, the standard should be intelligible to both parties; it should be free from ambiguity; and it should cover essential performance requirements. The attainment of these objectives is not easy; but they are certainly worth striving for.

Base Specifications on Consumer's Viewpoint

In addition to these fundamental requirements, I would recommend that your Association bear in mind, in developing your paper standards, two points which experience has shown to be important: (1) the specifications should be written from the consumers' view point rather than the manufacturers'; and (2) there should be different grades for each kind of paper rather than merely minimum standards. These points justify some further amplification.

To be of maximum use, your specifications should be intelligible not only to manufacturers and large organized purchasers, but also to that vast group known as the general public which constitutes the ultimate consumers of paper. While I believe that the paper industry has paid more attention than most other industries to the consumers' view-point, I must warn you against writing over the heads of your audience. You probably have a number of test methods which have been in common use for a generation. When you see the results of such a test, you unconsciously bring your experience into play and interpret the results in terms of service. If you will consider your test methods carefully, you will be surprised to discover that the results of many of them cannot be interpreted without this experience. While it may be assumed that all manufacturers and the larger customers have this experience, the great body of ultimate consumers has not. This class of your customers is growing increasingly insistent that the test results shall be of such a nature as to convey a meaning directly in terms of service, without requiring interpretation.

In other words, your specifications should, as far as possible, consist of performance requirements only. This kind of specification will be advantageous to manufacturers also, since it will give them complete freedom in the selection of raw materials and processes of manufacture.

In regard to grades, it seems increasingly evident that the establishment of a single minimum standard tends to bring the industry down to that standard. This is not to the advantage of the consumers or of the reputable manufacturers, but only to those few manufacturers whose products are now barely within the limits of the minimum standard. This can be avoided by establishing different grades of the same article. The consumer can then get a better quality if he wants to pay for it, and the reputable manufacturer is not compelled to offer his high-grade goods in direct price competition with inferior products.

Importance of Use Requirements

Here again, differences between grades should be based on differences in serviceability. Distinctions based upon raw materials and manufacturing processes would have to be interpreted through experience to convine the consumer that the so-called better grade is really better. The lack of such experience is apt to make the consumer skeptical about such a grading system.

Now a word as to what the Bureau of Standards can do to help you in this work. You will probably find certain properties of paper in which the consumer is vitally interested and for which there is no adequate method of test. In the development of such test methods, the Bureau has long been cooperating effectively with this Association. It is expected that this cooperation will continue.

There is also the need for correlating the information obtained from different kinds of tests, to ascertain the relationship between the kind of raw material and the manufacturing process on the one hand and the serviceability of the product on the other. Such investigations can be made only where the kind of raw material and the manufacturing process can be varied at will—in other words, only where there is an experimental paper mill. The Bureau of Standards has, as you know, such a mill, which has been used in this type of work for some years. If your proposed specifications are to be written in consumers' terms, they will probably have to be translated into the ordinary parlance of the industry, and this can be done only if the above relationships are known.

We shall be glad to cooperate with you to the fullest extent in helping you write your specifications. This offer is made with the expectation that it will involve assistance in the development of new test methods and in the correlation of results obtained by existing methods. Let me emphasize that the final document will be your specification and yours only.

Government Aid in Establishing Standards

When you have your standards prepared, you may, if you care to do so, present them to the American Standards Association or to the Bureau of Standards for consideration as commercial standards. Should the latter procedure be followed, the Bureau will undertake to have your standards considered by manufacturers, distributors and consumers. If a meeting of the minds can be achieved, and it always can eventually, the standards will then be promulgated by the Department of Commerce.

Such promulgation does not involve any obligation on the part of the Department or the Bureau. It simply means that the Bureau has found the standards so promulgated to be acceptable to a reasonable majority of the industry.

As a final step, it is necessary to provide means for convincing the consumer that the goods offered him are of the quality set forth in the appropriate specification, bearing in mind the fact that the vast majority of consumers have no testing facilities. This may be accomplished in one of three ways:

(1) The standards may be written into your N. R. A. codes, at the same time declaring it to be an unfair trade practice to misrepresent the quality of the goods.

(2) The Bureau will, if desired, set up a "willing-to-certify" list of manufacturers and distribute it to interested consumers. This is a list of those manufacturers who state their willingness to certify that their products meet the appropriate specifications. If the consumer re-

* Presented at the joint meeting of the Technical Association of the Pulp and Paper Industry and the American Paper and Pulp Association, New York, N. Y. Feb. 19, 1934.

[1] Director, United States Bureau of Standards, Washington, D. C.

quests such certification and the manufacturer agrees, the matter then becomes a contract between the two parties.

(3) If the manufacturers care to label their goods, guaranteeing that the quality is up to standard, the Bureau will be glad to assist in suggesting a satisfactory wording for the label.

The simplified practice recommendation establishing standard sizes for paper was promulgated by the Department on recommendation by the Bureau. This has just been revised and another similar recommendation is now being formulated. It is believed that you all understand the part which the Bureau takes in this work.

Paper manufacturers are to be congratulated for their vision in taking up voluntarily the preparation of standards of quality for the things which they sell. Reputable manufacturers can find no surer way of protecting their own interests than by convincing their customers that their products are of good quality. In this work of developing standards and making them effective, the Bureau of Standards is ready to help to the limit of its ability.

Pulp and Paper Operating Developments in 1933*

By Frederic C. Clark[1]

Preparation of Non-Fibrous Raw Materials

Water

The great importance of proper preparation of water for paper and pulp mills was recognized more in the last few years than previously. The considerable losses caused by water of low purity were investigated, and it was found that water of higher turbidity, or poor color, eventually rich in organic substances, or high in iron and manganese, or waters of variable composition, due to waste water, had to be treated with different methods than previously employed. The coagulation at different, and often at low pH, and the influence of agitation and settling were studied more thoroughly, also the role of chlorine with or without ammonia for color removal and for prevention of bacteriological growth. Attempts were made to find optimum conditions of the water for sheet formation.

Bleach Liquors

The most efficient methods to make calcium or sodium hypochlorite solutions were studied during the last few years, and considerable progress can be noted in the TAPPI Special Report No. 196. The average "bleach making efficiency" seems today to be 97 to 98 per cent, which is very satisfactory. The handling of chlorine gas formerly caused considerable difficulties, but the present equipment has minimized them and corrosion is hardly a factor any more.

Beside the Report No. 196, very valuable information about safe handling of chlorine can be found in an article by O. Wurz (*1*). Based on such knowledge, the direct chlorination of pulps instead of the use of bleach liquors could be developed, and was introduced in a considerable number of plants. Mostly from 40 to 70 per cent of the total chlorine consumption are applied, either direct as chlorine gas, or in fewer cases as chlorine water. The chlorination is either done in a batch system, or as a continuous process—mostly with special equipment. In some mills the existing Bellmer bleaching units are used and chlorine introduced through injectors, or directly under the mixing propeller. The measuring of chlorine gas and corrosion-resisting equipment were further developed. Rubber lined machinery, or stoneware was used considerably.

Sizing Materials

(A) *Rosin Sizing.* Of the new sizing processes, particularly the Bewoid method made considerable progress. This process is now introduced in 135 plants, and beside being commercially successful is also of great theoretical interest.

The Delthirna process progressed slower than in previous years, probably because it found serious competition from the dry sizes—which were considerably improved.

One type of dry size is now available with a higher free rosin content, beside the former fully saponified size.

The many phases of sizing were discussed in an important contribution by Sutermeister (*2*); furthermore, the work of Schütz & Klauditz (*3*), and a review by Lorenz (*4*), should be studied.

Colloid-chemical investigations by Kanamaru and Tsuchida (*5*), and by Ostwald and Gamm (*6*), and by Bialkowsky (*7*), show such a promising new approach to the problem that they should be mentioned also in this progress report.

The present status of the making of rosin size can be found in the TAPPI Special Report No. 189. Another report about the Application of Rosin Size (Special Report No. 188) will be issued shortly. Valuable information about factors in rosin size preparation is given by Ecke (*8*).

(B) *Wax Sizing.* The sizing with wax emulsions in addition, or instead of other sizing agents was widely discussed. Four different types of wax sizes are now available, (Bennet, American Cyanamide, Paper Makers Chemical Corporation, and National Oil Products Company).

The contributions of Neiztke (*9*), and Cobb (*10*), are particularly important.

(C) *Special Sizing Agents.* The old process of sizing with viscose was studied again, and is applied in a few cases (*11*).

(D) *Starch.* Considerable progress in better use of starches was made during 1933. The process of Rowland to precipitate the properly cooked starch through the addition of alum and alkali is very valuable (*12*). Different and newly prepared starch-gums work in a similar way.

The Clinton process of the addition of their gum before the paper machine, and the control of the optimum conditions promises to help much toward a better understanding of the complex reactions (*13*), (*14*).

B. Johnsen proposes to add starch solutions to the wet sheet (*15*), and Codwise adds it to the partially calendered paper (*16*).

Fillers

The next step in treating of a wet sheet with a starch solution is the incorporation of fillers with the starch, as

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[1] Chairman, TAPPI Operating Division, Skinner & Sherman, Inc., Boston, Mass.

in the Paraprint process of The Mead Corporation (*17*), or other different surface treatments with filler and adhesive mixtures to improve on the two-sidedness of paper, or to increase the opacity.

Such improvements in opacity, whiteness and printability, are also intended with the addition of titanium, or zinc sulphide compounds to the beater (*18*), (*19*), which are used today in fairly large amounts.

The use of calcium carbonate filler has been considerably increased since it was learned to overcome some of the major sizing troubles. Rafton has again proposed different, interesting processes (*20*). Improvements on the usual preparation of such filler were made by O'Connor (*21*), and by Rafton (*22*). The last mentioned processes intend the reduction of particle-aggregates by application of pressing the filler through an orifice, or through a colloid mill, or through ultra-size wire cloth. Rafton has proposed, too, to reduce clay in particle size (*23*).

Very promising also is the classification of clay into fractions of certain particle sizes. The very finest particles are used successfully for coating, and their much higher color and better finishing quality are remarkable. The coarse fraction of this clay is used to advantage as a filler. Very valuable experiments with clay fractions were given by Lorenz (*24*).

Coloring of Paper

In the field of dyestuffs, progress in the improvement of solubility, purity, color strength and brilliance for many types can be noted. A considerable amount of detail work was done to solve special problems, and a valuable investigation by Soderberg *(25)* should be studied.

Phosphotungstic acid lakes seem to be used to a larger degree, and the lakes formed between basic dyestuffs and products similar to tannic acid, like tannol, appear to be promising. Non-bleeding calender stainings and, again, many new effects in fancy papers were proposed.

Preparation of Fibrous Raw Materials

Developments during the past year have applied more to the perfection of equipment, particularly in the use of special steel for chipper knives. Steels have been developed that show a marked increase in life and a corresponding reduction in cost of knives per ton of pulp produced.

A new type of barker is being tried out on the West Coast, but results to date do not warrant more than this brief notice.

Mechanical Pulping

Several companies are developing new types of refiners for particular use in refining ground wood screenings. Some of these results are very encouraging.

Continued work with tests for screening fractions have established the importance of various sizes of ground wood fiber and their effect on the characteristics of the finished sheet. Undoubtedly more work will be done in this study.

Methods have been suggested to convert the indefinite cord measure to a definite cubic foot measure, based on a definite dry wood density per cubic foot. It is claimed that the method of making these determinations has been perfected to a point where it may be given practical application.

The past year has seen further work in the development of a method for the use of Georgia pine for ground wood pulp. This work by C. H. Herty and W. G. MacNaughton is of great interest to the entire industry.

Acid Pulping

Digester circulating systems are being given further study and developments in the use of special steels and non-corrosive alloys will rapidly broaden the application of this method of digesting sulphite pulp. The development of the process of using Georgia pine for pulping by the sulphite process has been further perfected by Dr. Herty and Mr. MacNaughton, with the result that a good quality pulp has been produced.

Alkaline Pulping

The sulphate pulp industry has been studying possibilities of continuous pulping and continuous bleaching. Considerable progress has been made in a new bleaching operation which shows an economy in the use of chlorine, and ease of control without the usual loss in strength. Further development work is being carried on in this process.

Stuff Preparation

The principal activity during the past year both in the mills and with manufacturers of paper mill equipment has related to a study of beating and the development of continuous refiners. It is claimed that some of the new continuous refiners may completely supersede the present beater, particularly on wood pulp stock. One paper company has developed an ingenious device for continuously weighing the beater roll for the purpose of maintaining a uniform pressure of beater roll on the bedplate.

New consistency regulators are being developed, and particularly some of the older devices are being perfected in order to secure a higher degree of accuracy of operation.

Paper Manufacture

During the past year the principal developments in paper manufacturing equipment have pertained to various machine parts such as cylinder molds, new steam joints, magnetic clutches, gear drives, and rubber covering for perforated bottom rubber suction press rolls. All of these developments are finding a ready use in the industry.

A new dandy roll is being tried out where the dandy roll covering is made up as a cylinder which may readily be slipped over a journal. It is claimed that this dandy roll is lighter than the usual construction.

Finishing

There have been no important changes in this branch of manufacturing except that more finishing room equipment is being built with roller and ball bearings, which has resulted in speeding up production with a corresponding decrease in power consumption.

There are a number of developments in progress in the industry that have been held up somewhat because of general financial conditions. A general improvement in business will undoubtedly see many of these developments brought to completion and used in the industry.

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Standardization from Consumer's Viewpoint*

By N. H. Stuart[1]

Our secretary has requested me to present briefly the viewpoints of the converter and the consumer on the desirability of paper classification and standards.

I represent a converter organization, manufacturing at plants located in different parts of the United States, in Canada and abroad, a complete line of office equipment and supplies of all kinds, including adding machines, accounting machines, tabulating machines, typewriters of all kinds including noiseless, fanfold, and portable models. We manufacture filing cabinets and the folders, indexes and guides to be used in same; also vertical card cabinets, cards, card indexes, Kardex visible card systems with celluloid protected edges, as well as a great variety of other visible equipment. We manufacture a complete line of loose leaf binders, sheets, and indexes. We have one plant devoted exclusively to the production of carbon papers and typewriter ribbons, and boxed typewriter papers.

We have in the United States alone, six modern plants manufacturing the paper products of all kinds required for use in or with our office equipment. Since a large part of our output is sold direct to the user through our own selling organizations in this country and abroad, we may be justified in our belief that we are quite familiar with the user's requirements of the many different types of papers used in the manufacture of our products.

In presenting the consumer's viewpoint on the desirability of paper classification and standards (and I might add simplification), I would like to refer you to the records of a conference held on October 2, 1929, at Washington, D. C., under the auspices of the Bureau of Standards, for the purpose of discussing the desirability of commercial standards for record and printing papers. This conference was attended by many of the leading lights in the paper industry and by representatives of distributor and consumer groups.

The Bank Executive's Viewpoint

Said R. E. Flynn, Purchasing Agent of the Union Trust Company of Detroit: "It is unquestionably true that banks generally use far too many grades of paper. It is also true that there is often no apparent relation between the grades of paper employed and the respective uses for which they are intended. Colors are sometimes used without any regard for added costs and standard sizes are ignored by office managers and department heads, all of which cause extra worry to both buyers and printers. Briefly stated, banks are chiefly interested in the standardization of paper grades, sizes and colors, because this makes possible the securing of (1) better value for money expended, (2) better quality, (3) prompt deliveries, (4) lower inventory costs, (5) simplified purchasing, (6) protection against unscrupulous paper merchants and (7) easier match-ups and reprints."

Public Utilities

The requirements for paper quality standards by public utilities as reflected by the experience of the Detroit Edison Company were reviewed by W. Fathers, Stationery Buyer of that company. Mr. Fathers pointed out the various points considered when specifying paper stock for various printing jobs which are, namely, the purpose for which the paper will be used, life of the form, the handling it will receive, its printing or writing qualities and, lastly, its appearance. Careful study and a survey of the requirements led the Detroit Edison Company to the conclusion that a few grades of stock could be made to take care of all requirements. Accordingly there were selected four grades of bonds, two grades of ledgers and two grades of index bristol, which items constitute the greater part of their purchases. It has also been found possible to limit colored papers to buff, pink, blue, and green.

Mr. Fathers told of correspondence with other public utilities which seemed to bear out their own findings as to the need of only a comparatively few grades of paper for all purposes.

Life Insurance Companies

Leo H. McCall of the New York Life Insurance Company presented the need of paper standards by insurance companies. Mr. McCall pointed out that the business of insurance is conducted almost entirely on paper much of which must out-live the policy by scores of years. Practically all the other less permanent grades of paper are used in the insurance business and Mr. McCall pointed out that lack of knowledge of the specifications called for to produce a paper having the qualities necessary to meet given requirements was the chief difficulty besetting the purchase of these papers.

It was Mr. McCall's opinion that all these papers could be standardized and that the result would be economical for both the producer and consumer.

Investment Houses

Investment house requirements for paper were reviewed by James W. King of the Electric Bond & Share Company, who said: "Under existing conditions, without standard grades, and with the consequent multiplicity of brands and grades offered, most users find in their supply of papers many different qualities and brands furnished by the several printing houses who compete for their orders. The variety increases as the users extend their source of supply in endeavors to obtain lower prices. There are partial exceptions to this situation, however, in the case of those users whose business is sufficiently large to permit them to contract for their printing on an annual basis, using a paper selection which has been standardized by the printer for his requirements only. Such large users have thus realized some of the benefits which standard grades will afford. They are, however, unable to realize the maximum benefits which standard grades will afford to all users, both large and small."

Industrial Users of Paper

The paper requirements of industrial users were told by H. M. Werntz of the Westinghouse Electric & Manufacturing Company. His remarks, in part, were as follows:

"I have been deeply impressed with what appears to be the fact that the paper industry has for years been trying to find itself. Therefore, I should say that the main reason why we desire standardization is the fact that we wish to cooperate with them. The cure for our troubles is the cure for theirs. Whatever simplifies matters for us, will simplify them for the paper makers. Hence, it would seem that the problem is not our problem; it is a common

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[1] Member TAPPI, Buyer, Remington-Rand Inc., Buffalo, N. Y.

problem that concerns the manufacturers as well as all classes of users.

"The reasons why industrial users desire a commercial standardization of paper grades, paper qualities, and paper terminology are simply told.

"In the first place they would like to learn a common language, and to be able to understand and talk with the paper maker or his distributor or the printer in his own tongue, the simplified Esperanto of Paperdom, if you please.

"Industrial users wish to see the number of grades reduced to a minimum and clearly defined and guaranteed, as to content, quality, service, and permanence. This they believe will simplify and clarify matters for everybody concerned, for the maker, no less than for the users.

"Such simplification and certainty, industrial users believe, will give impetus and direction to their own programs of standardization of forms, of materials, and of manufactured product. In short, it will prove to be of great economic benefit to all concerned.

"It will save industrial users time and money on their purchases, and reduce the makers' and the distributors' costs of production and sale.

"It will provide industrial users with a basis for the economical selection of paper for specific purposes, so that the users will know that they are using the right paper for each and every purpose, and so that the maker and his distributor and the printer will know that they will have pleased and satisfied customers.

"It will reduce the costs of printing for industrial users, by eliminating the guess work, in buying and prescribing paper, and making it possible to order printing on a businesslike basis."

The paper needs of schools and colleges was presented by Theodore M. Johnson of New York University, who was also president of the Educational Buyers Association of America. Mr. Johnson conducted a survey of the needs of many of the larger institutions of learning and discussed the several grades of paper that were in greatest demand. He felt sure that many more grades than actually needed are in use and that standardization would eliminate many of these to the ultimate advantage of all concerned.

C. F. McConnell of the Sears Roebuck & Company at this point suggested that definite standards, that could be readily recognized through the use of some symbol would be ideal as far as purchasers were concerned. Such a system, he said, would break down salesmen's claims that their papers were equal or superior to certain well known brands and would redound to the mutual benefit of the honest manufacturer and the purchaser.

W. L. Chandler, a former president of the National Association of Purchasing Agents, said in substance, that many purchasers look upon standard grades as something revolutionary. They have regarded paper as something mysterious and understood by only a chosen few and often have made little effort to learn anything about it. In his opinion commercial standards of quality will help the purchasing agent to know more about paper and will get it in the open for a better understanding between salesmen and purchaser.

Paper Purchases of the Printer

As a large user and distributor of paper, the printer is very materially concerned in the matter of standard grades. This phase of the conference was covered by William H. Walling, Treasurer, Abbott Press & Mortimer-Walling, Inc., of New York. Mr. Walling's remarks in part are as follows:

"The standardization of paper sizes has already been of considerable value to the printer, and the proposed standards of quality for record and printing papers would also greatly aid him. There could be no better way to clear up a very confused situation than to have specified standards of quality, issued by the Department of Commerce and approved by the American Standards Association.

"At the present time grades are largely a matter of opinion and salesmanship. There are no accepted standards. The quality printer is at a disadvantage in specifying too high a grade of paper, even though the job requires such a paper.

"The same situation applies to practically every grade and kind of paper which a printer uses. He loses many an order through unequal competition. He frequently is forced to use a paper unsuitable for a job, because some competitor has represented it to be 'just as good'.

"There are fourteen different kinds of fine papers which are in almost constant daily use in the average print shops of the country. A standard of quality for each one of these classifications would protect the printer and the ultimate consumer from blind buying of brands which may or may not be better than other brands.

"Representing no particular association of printers, but rather the sentiment of many printers the country over, who use a large part of the nation's paper output, we urge that these standards of quality be set up; and that the manufacturers of papers market their product clearly certified and marked as to the standard it meets."

While this may go beyond the subject assigned to me, I feel, nevertheless, that certain remarks made by Oswold F. Marquardt of Marquardt, Blake and Decher, Inc., at that conference should be noted here. Said Mr. Marquardt:

"Standard brands, guaranteed by manufacturers to be made according to standard specifications, covering materials used and the purposes for which the product is intended, would result in purchases by consumers of fewer items in larger volume which would lower the cost not only of manufacture but distribution, particularly in metropolitan centers where congestion is constantly increasing the cost of distribution. It is my belief that forward looking merchants will be heartily interested in subscribing to the intent of this committee's work.

"Progress in any program of standardization is slow and looked upon with fear and trembling by conservatives, for they see a possible loss of business, but I have only to point to a few outstanding examples, such as automobiles, electric refrigerators, radios, telephones, etc., to prove to such skeptics that the industrial supremacy of the United States today is due primarily to the principles of standardization in methods, in production and in commodities, all of which has ultimately resulted in lowering of costs, and as such costs have been lowered new uses and markets have been discovered unthought of before."

The foregoing, it seems to me, is fully representative of the consumer viewpoint on the desirability of commercial standards for record and printing papers.

In passing I might say that it was a matter of great regret to many of us who attended the conference, that the committee of manufacturers appointed by the American Paper and Pulp Association to study and set up definite standards of quality, life, and service of various papers, failed to obtain the cooperation of the Paper Industry at that time.

In the absence of definite classifications and gradings of paper qualities, much of the sales promotion and advertising of individual mill brands has only served to confuse the consuming public as to real relative merits and values of papers.

IMPORTS OF PAPER AND PAPER STOCK

NEW YORK, BOSTON, PHILADELPHIA AND OTHER PORTS

NEW YORK IMPORTS

WEEK ENDING APRIL 14, 1934

CIGARETTE PAPERS

Champagne Paper Corp., Pipestone County, Havre, 257 cs. Liggett & Myers Tobacco Co., Pipestone County, Havre, 334 cs.; Standard Products Corp., Ile de France, Havre, 60 cs.; De Manduit Paper Corp., Pr. Harding, Havre, 145 cs.

WALL PAPER

F. J. Emmerich, Berlin, Hamburg, 5 bls.; J. E. Bernard & Co., Berlin, Bremen, 1 bl.; ——, Amer. Farmer, London, 3 bls.; —— Berlin, Bremen, 3 cs.; Heemsoth Basse & Co., Deutschland, Hamburg, 6 bls.

WALL BOARD

Treetex Corp., Skagern, Gothenburg 2,255 bdls.

PAPER HANGINGS

W. H. S. Lloyd & Co., Amer. Farmer, London, 2 bls., 1 cs.

NEWS PRINT

Perkins Goodwin & Co., Berlin, Hamburg, 118 rolls; Jay Madden Corp., Berlin, Bremen, 133 rolls; Lunham & Reeve, Inc., Scanmail, Hango, 484 rolls; Jay Madden Corp., Scanmail, Hango, 378 rolls; Brooklyn Times, Skagern, Norrkoeping, 603 rolls; Jay Madden Corp., Cliffwood, Hango, 415 rolls; Perkins Goodwin & Co., Deutschland, Hamburg, 549 rolls; —— Deutschland, Hamburg, 49 rolls.

PRINTING PAPER

International F'd'g Co., Black Tern, Antwerp, 12 cs., 6 rolls; Ozalid Corp., Statendam, Rotterdam, 98 cs.; F. C. Strype, Statendam, Rotterdam, 28 cs.

WRAPPING PAPER

F. C. Strype, Black Tern, Antwerp, 10 cs.; Yardley & Co., Amer. Farmer, London, 6 cs.; Meadows Wye & Co., Amer. Farmer, London, 4 cs.; ——, Skagern, Gothenburg, 20 bls.; Walker Goulard Plehn Co., Pr. Harding, Hamburg, 639 rolls.

PACKING PAPER

Scharf Bros. Co. Inc., Statendam, Rotterdam, 4 cs.

FILTER MASS

Mager Bros. Co., Berlin, Hamburg, 75 bls.

FILTER PAPER

H. Reeve Angel & Co. Inc., Amer. Farmer, London 8 cs.

DRAWING PAPER

H. Reeve Angel & Co. Inc., Amer. Farmer, London, 2 cs.

METAL COATED PAPER

K. Pauli Co., Berlin, Hamburg, 43 cs.; K. Pauli Co., Deutschland, Hamburg, 40 cs.; Globe Shipping Co., Deutschland, Hamburg, 13 cs.

COATED PAPER

Chas. Happel, Berlin, Hamburg, 17 cs.

SURFACE COATED PAPER

Gevaert Co. of America, Black Tern, Antwerp, 27 cs.; Atlantic F'd'g Co., Deutschland, Hamburg, 29 cs.; Rothschild Importing Co., Deutschland, Hamburg, 54 cs.

PHOTO PAPER

American Express Co., Deutschland, Hamburg, 16 cs.

COLORED PAPER

International F'd'g Co., Deutschland, Hamburg, 7 cs.

DECALCOMANIAS

Sellers Transportation Co., Deutschland, Hamburg, 29 cs.

TISSUE PAPER

Van Oppen & Co., Pr. Hayes, Marseilles, 6 cs.

MATRIX PAPER

M. Sorsska, Berlin, Hamburg, 2 cs.

BLOTTING PAPER

J. & H. Berge, Montreal City, Bristol, 2 cs.

STRAW BOARDS

A. B. Massa Corp., Statendam, Rotterdam, 1,361 pkgs.

TRANSPARENT PAPER

Mitsui & Co. Ltd., Taihei Maru, Yokohama, 4 cs.

MISCELLANEOUS PAPER

Japan Paper Co., Sunanvik, Kobe, 44 cs.; ——, Sanyo Maru, Yokohama, 8 cs.; T. N. Fairbanks Co., Sanyo Maru, Yokohama, 6 cs.; E. H. Sargent & Co., Skagern, Gothenburg, 9 cs.; Japan Paper Co., P. Maersk, Kobe, 6 cs.; C. Schleicher & Schull Co. Inc., Deutschland, Hamburg, 11 bls.

RAGS, BAGGINGS, ETC.

Loumar Textile By-Products Inc., Berlin, Bremen, 72 bls. bagging; ——, Berlin, Hamburg, 85 lbs. cotton waste; Darmstadt Scott & Courtney, Pipestone County, Dunkirk, 60 bls. bagging; Castle & Overton, Inc., Pipestone County, Dunkirk, 150 bls. rags; Castle & Overton, Inc., Pipestone County, Havre, 34 bls. rags; Atlas Waste Manfg Co., Pipestone County, Havre, 39 bls. rags; ——, Siboney, Havana, 18 bls. rags; Banco Coml Italiane Trust Co., Lucia C., Trieste, 114 bls. rags; Manufacturers Trust Co., Lucia C., Naples, 67 bls. rags; Hicks Costarino & Co., Lucia C., Naples, 30 bls. rags; Chase National Bank, Black Tern, Antwerp 79 bls. cotton waste; Royal Manfg Co., Black Tern, Antwerp, 57 bls. cotton waste; Castle & Overton, Inc., Black Tern, Antwerp, 96 bls. bagging; Darmstadt Scott & Courtney, Black Tern, Antwerp, 467 bls. jute waste; Darmstadt Scott & Courtney, Black Tern, Antwerp, 18 bls. twine waste; Darmstadt Scott & Courtney, Black Tern, Antwerp, 71 bls. bagging; O'Brien Padawer, Inc., Black Tern, Antwerp, 722 bls. cotton waste; Leigh Textile Co., Black Tern, Antwerp, 155 bls. cotton waste; E. J. Keller Co. Inc., Black Tern, ——, 130 bls. rags; E. J. Keller Co. Inc., Black Tern, ——, 116 bls.

bagging; E. J. Keller Co. Inc., Black Tern, ——, 150 bls. flax waste— National City Bank, Amer. Farmer, London, 5 bls. rags; Bank of N. Y. Trust Co., Amer. Farmer, London, 62 bls. paper stock; C. E. Andre, Statendam, Rotterdam, 178 bls. cotton waste; Chase National Bank, Statendam, Rotterdam, 112 bls. cotton waste; J. J. Ryan & Son Inc., Statendam, Rotterdam, 159 bls. cotton waste; E. J. Keller Co. Inc., Estrella, ——, 118 bls. rags; ——, Estrella, Barcelona, 642 bls. rags; Trust Co. of North America, Estrella, Malaga, 52 bls. rags; C. Comiter Co., P. Maersk, Kobe, 50 bls. rags; E. J. Keller Co. Inc., City of Flint, ——, 67 bls. bagging; ——, City of Flint, Manchester, 441 bls. cotton waste; M. Snedeker Corp., Winona County, Belfast, 255 bls. paper stock; H. G. Lichtenstein, Winona County, Leith, 193 bls. bagging; E. J. Keller Co. Inc., Winona County, ——, 50 bls. flax waste; Chase National Bank, Winona County, Dundee, 69 bls. paper stock; Castle & Overton, Inc., Winona County, Dundee, 178 bls. paper stock, Chase National Bank, Deutschland, Hamburg, 38 bls. rags; ——, Deutschland, Hamburg, 64 bls. cotton waste; Manufacturers Trust Co., Deutschland, Hamburg, 100 bls. cotton waste; E. J. Keller Co. Inc., Livenza, ——, 92 bls. bagging.

OLD ROPE

Banco Coml Italiane Trust Co., Berlin, Bremen, 128 coils; ——, Kyno, Newcastle, 87 pkgs.; S. Birkenstein & Son, Winona County, Belfast, 48 coils.

CASEIN

D. C. Andrews & Co., Berlin, Hamburg, 50 bags; D. C. Andrews & Co., Deutschland, Hamburg, 50 bags.

CHINA CLAY

Whitaker Clark & Daniels, Antonia, Liverpool, 390 bags; English China Clays Sales Corp., Antonia, Liverpool, 320 bags; —— Montreal City, Bristol, 25 casks.

WOOD PULP

Castle & Overton, Inc., Berlin, Hamburg, 610 bls. wood pulp, 122 tons; Castle & Overton, Inc., Scanmail, Hango, 2,844 bls. sulphite 569 tons; Lagerloef Trading Co., Scanmail, Hango, 3,044 bls. sulphite, 527 tons; Lagerloef Trading Co., Scanmail, Hango, 970 bls. sulphate, 194 tons; Atterbury Bros. Inc., Scanmail, Hango, 324 bls. sulphate, 54 tons; A. Giese & Son, Statendam, Rotterdam, 68 bls. wood pulp; Pagel Horton & Co. Inc., Skagern, Karskar, 500 bls. sulphate; Pagel Horton & Co. Inc., Skagern, Karskar, 250 bls. sulphite; Perkins Goodwin & Co., Skagern, Halmstad, 750 bls. sulphite; Gottesman & Co., Inc., Skagern, Halmstad, 725 bls. sulphite; Perkins Goodwin & Co., Skagern, Gothenburg, 2,540 bls. kraft pulp; The Borregaard Co. Inc., Skagern, Gothenburg, 300 bls. chemical pulp; D. M. Hicks, Inc., Skagern, Gothenburg, 300 bls. sulphite; Price & Pierce, Ltd., Siren, Hernosand, 3,000 bls. sulphate, 500 tons; Price & Pierce, Ltd., Siren, Hernosand, 450 bls. sulphite, 75 tons; Bank of N. Y. Trust Co., Deutschland, Hamburg, 555 bls. wood pulp, 111 tons.

WOOD PULP BOARDS

H. Fuchs & Son, Skagern, Gothenburg, 60 bls.; Wilkinson Grey & Co., Skagern, Gothenburg, 20 rolls.

ALBANY IMPORTS

WEEK ENDING APRIL 14, 1934

Price & Pierce, Ltd., Siren, Hernosand, 9,300 bls. sulphate, 1,550 tons; Lagerloef Trading Co., Cliffwood, Hango, 2,281 bls. sulphite, 380 tons; Castle & Overton, Inc., Cliffwood, Hango, 3,761 bls. sulphite, 753 tons.

PORTLAND IMPORTS

WEEK ENDING APRIL 14, 1934

E. M. Sergeant & Co., Siren, Hernosand, 3,750 bls. sulphite.

BOSTON IMPORTS

WEEK ENDING APRIL 14, 1934

G. M. Graves Co., Pipestone County, Havre, 95 bls. rags; Ayres W. C. Jones Co., Pipestone County, Havre, 42 bls. waste; ——, Pipestone County, Havre, 112 bls. bagging; Pagel Horton & Co. Inc., Skagern, Karskar, 1,375 bls. sulphate; Pagel Horton & Co. Inc., Skagern, Karskar, 125 bls. sulphite; Stora Kopparberg Corp., Skagern, Skutskar, 1,750 bls. wood pulp; Gottesman & Co. Inc., Skagern, Halmstad, 1,500 bls. wood pulp; Perkins Goodwin & Co., Skagern, Gothenburg, 1,270 bls. sulphite; Perkins Goodwin & Co., Skagern, Gothenburg, 127 bls. sulphate; ——, Skagern, Gothenburg, 251 rolls wrapping paper; J. Anderson & Co., Skagern, Gothenburg, 2,250 bls. sulphite; H. Fuchs & Son, Skagern, Gothenburg, 61 bls. wood pulp boards; E. M. Sergeant & Co., Skagern, Gothenburg, 150 bls. kraft soda pulp; Johaneson Wales & Sparre, Inc., Skagern, Gothenburg, 150 bls. kraft soda pulp; Beech Nut Packing Co., Skagern, Gothenburg, 156 rolls paper; American Agricultural Chemical Co., City of Flint, Liverpool, 540 bags hide cuttings; G. F. Malcolm Inc., City of Flint, Liverpool, 11 cs., tissue paper; T. D. Downing & Co., City of Flint, Liverpool, 52 bls. paper stock; Bulkley Dunton & Co., Uruguay, ——, 150 bls. wood pulp; Bulkley Dunton & Co., West Arrow, ——, 560 bls. wood pulp.

PHILADELPHIA IMPORTS

WEEK ENDING APRIL 14, 1934

——, Mineola, Helsingfors, 2,540 bls. sulphite; Phila. National Bank, Ala, Antwerp, 614 bls. rags; ——, Ala, Antwerp, 140 bls. rags; ——, Black Gull, Antwerp, 462 bls. rags; ——, Montreal City, Fowey, 1,985 tons, 15 cwt china clay; E. J. Keller Co. Inc., Pipestone County, ——, 102 bls. rags; Lagerloef Trading Co., Scanmail, Hango, 1,807 bls. sulphite, 325 tons; J. W. Hampton, Jr. & Co., Scanmail,Hango, 72 rolls newsprint; ——, Sanyo Maru, Kobe, 30 bls. rags; Gilman Paper Co., Skagern, Norrkoeping, 575 rolls newsprint; Trust Co. of North America, Skagern, Fredrikskans, 250 bls. sulphate; Stora Kopparberg Corp., Skagern, Skutskar, 1,925 bls. wood pulp; Trust Co. of North America, Estrella, Barcelona, 100 bls. rags; Bank of N. Y. Trust Co., Estrella, Barcelona, 15 bls. rags; E. J. Keller Co. Inc., P. Maersk, ——, 400 bls. rags; Phila, National Bank, P. Maersk, Kobe, 50 bls. rags; Corn Exchange Bank Trust Co., P. Maersk, Kobe, 25 bls. rags; Chase National Bank, P. Maersk, Kobe, 40 bls. rags; Bank of N. Y. Trust Co., Winona County, Belfast, 99 bls. paper stock; E. J. Keller Co. Inc., West Selene, ——, 46 bls. rags; E. J. Keller Co. Inc., Exermont, —— 195 bls. rags.

BALTIMORE IMPORTS

WEEK ENDING APRIL 14, 1934

Darmstadt Scott & Courtney, City of Flint, Manchester, 76 bls. bagging; Bulkley Dunton & Co., Ala, ——, 2,847 bls. wood pulp.

NORFOLK IMPORTS

WEEK ENDING APRIL 14, 1934

E. J. Keller Co. Inc., Black Tern, ——, 110 bls. bagging; Bank of N. Y. Trust Co., Estrella, Barcelona, 198 bls. rags; National City Bank, P. Maersk, Kobe, 400 bls. bagging; Chase National Bank, P. Maersk, Kobe, 120 bls. bagging; ——, City of Flint, Liverpool, 136 bls. bagging; E. Butterworth & Co. Inc., City of Flint, Manchester, 87 bls. bagging; ——, City of Flint, Manchester, 111 bls. bagging.

GALVESTON IMPORTS

WEEK ENDING APRIL 14, 1934

National City Bank, Sanyo Maru, Kobe, 395 bls. bagging.

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for Perfect Beating of Every Type of Stock

FACTS

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By equipping your mill with MARCY ROD MILLS—you reduce upkeep and labor costs—yet produce a product of highest quality.

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Magnus FELT SOAP

New York Market Review

Office of the PAPER TRADE JOURNAL,
Wednesday, April 18, 1934.

Sentiment in the local paper market continues optimistic. Demand for the various standard grades of paper is satisfactory for the time of year. Sales forces of the leading paper organizations are conducting an active campaign for new business. Prices are generally holding to previously quoted levels.

The newsprint paper market is exhibiting a strong undertone. Statistics gathered by the News Print Service Bureau show that the output of the North American mills for the first three months of the year was 205,419 tons greater than in the corresponding period of 1933, making a net increase of 30 per cent.

Steadiness prevails in the fine paper market. Demand for writing and cover papers is persistent. Prices are holding up well. Tissues are moving in good volume. The coarse paper market is showing slightly greater activity. Production of paper board is being maintained in ample volume for current requirements.

Mechanical Pulp

The position of the ground wood pulp market is practically unchanged. Manufacturing operations both in the United States and abroad are keyed to consumption and the statistical position of the industry is sound. Prices are holding to schedule and reports of concessions are infrequent.

Chemical Pulp

Trading in the chemical pulp market is moderately active. Demand for domestic and imported kraft pulp is well maintained. Bleached sulphite is also displaying strength. First shipments of the season are en route from North Sweden. Prices of the various grades remain steady and unchanged.

Old Rope and Bagging

The old rope market is practically marking time. Paper mill demand for domestic and foreign old manilla rope is rather listless. Small mixed rope is moving slowly. Old rope prices are generally steady. The bagging market is moderately active. Offerings of scrap and gunny bagging are limited and prices are firm.

Rags

Continued improvement is reported in the domestic rag market. Demand for new cotton rags is slightly better. No. 1 white shirt cuttings are firm. Roofing grades are somewhat easier. There is a better feeling in the imported rag market despite the uncertainty of the foreign exchange situation.

Waste Paper

No radical changes were reported in the paper stock market. Now that board mill business is improving the outlook for the lower grades is more encouraging. Old kraft machine compressed bales are in better request than of late. Hard and soft white shavings and white envelope cuttings continue steady.

Twine

Conditions in the local twine market are fairly satisfactory. Demand for the various grades is mostly along seasonal lines. Supplies are moving into consumption with regularity. Prices are holding to formerly quoted levels, despite the usual keen competition.

Discourage Olfactory Suits

CAMAS, Wash., April 14, 1934.—Serving notice on those individuals bringing suit against the Crown Willamette Paper Company for outraging their olfactory senses and still more notice on those who might have ambitions along that line, that they would receive no aid or comfort from Camas professional and business men, the local chamber went on record this week to oppose all such suits brought against the paper company.

A committee composed of John Lund, Roy Dobbs, M. L. Schwary and W. Swank was appointed to fight the epidemic of suits threatened by citizens who claim their sense of smell has been damaged by the paper mill fumes. This committee is given unlimited power to help the paper company fight the suit now pending and may hire attorneys and raise funds to help in such ways as they deem best to assist the mill company.

It was the unanimous opinion that no property damage had been done from the fumes of the converting plant, and so far as those present knew no one had received any injury from this source. The business and professional men of Camas at the meeting were emphatic in their opposition to the suit being brought against the company and were determined to build up a state of mind in the community more appreciative of the paper company as a source of employment in this locality.

Harrisville Mill May Reopen Soon

[FROM OUR REGULAR CORRESPONDENT]

HARRISVILLE, N. Y., April 16, 1934.—A cessation of operations by the Harrisville Paper Company has caused much anxiety to local residents and business men are hopeful for an early reopening. The plant shut down because of a lack of orders, it was stated, and it is understood that it will re-open within the next two weeks. During the winter the mill operated on fairly good schedules and the shut-down was somewhat of a surprise to local residents.

American Wins Point in Power Case

[FROM OUR REGULAR CORRESPONDENT]

HOLYOKE, Mass., April 17, 1934.—The American Writing Paper Company, Inc., won its first point in the case that was brought against it by the Holyoke Water Power Company on an alleged wasting of the water through its wheel in the idle mills of the paper company. The Water Power Company asked for an immediate trial but this was denied by Judge Harold Williams in the Hampden County Superior Court, who advised the petitioners to bring a suit in equity to this end.

WOOD PULP
AGENTS

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As machines were improved, EXCELSIOR FELTS were more appreciated. Their friction-resisting qualities—their finishes—all were more clearly demonstrated.

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TRIUNE and MULTIPLE PLY**

Serve every Felt Purpose in an efficient and satisfactory way.

60" to 288"

ENGLISH or BAKER WOVEN

Made in three, four, five and six ply—60" to 288" wide.

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Scientific Joining Alligator Steel Belt Lacing holds the belt in a vise-like compression grip. Prevents ply separation at belt ends. The smooth flexible joint is reliable in service and has great surplus strength. It rocks on oval faces of the sectional hinge pin.

Quickly and Easily Applied with only a Hammer

Combines the efficiency of an endless belt and the convenient take-apart feature. In general use on light, medium and heavy belts of all types. Made also in "monel metal". Eleven sizes. Sold the world over.

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To avoid imitations look for the Alligator on the yellow labeled box and stamped on the lacing.

NEVER LETS GO

Miscellaneous Markets

Office of the PAPER TRADE JOURNAL,
Wednesday, April 18, 1934.

BLANC FIXE.—The position of the blanc fixe market is practically unchanged. Prices are holding to schedule. The pulp is quoted at from $42.50 to $45 per ton, in bulk; while the powder is selling at from 3½ to 3¾ cents per pound, in barrels, at works.

BLEACHING POWDER.—Some improvement was noticed in the bleaching powder market. The contract movement is well up to average. Prices generally remain steady and unchanged. Bleaching powder is quoted at from $1.90 to $2.15 per 100 pounds, in drums, at works.

CASEIN.—The casein market is marking time. Domestic standard ground is quoted at 12½ cents and finely ground at 13½ cents per pound. Argentine standard ground is selling at 14¾ cents and finely ground at 15 cents per pound, all in bags, car lot quantities.

CAUSTIC SODA.—Steadiness prevails in the caustic soda market. The contract movement is normal. Solid caustic soda is quoted at from $2.60 to $3.10; while the flake and ground are selling at from $3 to $3.05 per 100 pounds, in large drums, at works.

CHINA CLAY.—The china clay market continues firm. Shipments against contract are going forward in good volume. Imported china clay is quoted at from $13.50 to $21 per ton, ship side; while domestic paper making clay is selling at from $5 to $12 per ton, at works.

CHLORINE.—Demand for chlorine is fairly persistent. The contract movement is satisfactory. Prices are holding to former levels. Chlorine is quoted at from $2 to $2.25 per 100 pounds, in tanks, or multi-unit cars, in ton lots, or over, at works.

ROSIN.—The rosin market is displaying strength. The grades of gum rosin used in the paper mills are now quoted at from $6.25 to $6.45 per 280 pounds, in barrels, at works; while wood rosin is selling at $5.10 per 280 pounds, in barrels, at southern shipping points.

SALT CAKE.—Consumption of salt cake is being maintained in greater volume than last year. Salt cake is still quoted at from $12 to $14; chrome salt cake at from $12 to $12.50 per ton, at works; and imported salt cake at from $12 to 12.50 per ton, on dock.

SODA ASH.—The soda ash market is fairly buoyant. Contract shipments are moving freely. Prices are steady to firm. Quotations on soda ash, in car lots, at works, per 100 pounds, are still as follows: in bulk, $1.10; in bags, $1.40; and in barrels, $1.50.

STARCH.—While the starch market continues quiet, the condition of the industry is sound. Prices are holding to schedule. Special paper making starch is quoted at $2.67 per 100 pounds, in bags; and at $2.95 per 100 pounds, in barrels, at works.

SULPHATE OF ALUMINA.—Trading in the sulphate of alumina market is brisk. The contract movement is fairly heavy. Commercial grades are still quoted at from $1.35 to $1.50; while iron free is selling at from $1.90 to $2.05 per 100 pounds, in barrels, at works.

SULPHUR.—The sulphur market continues steady. Sulphur is quoted at $18 per long ton, on orders of 1,000 tons, or over, on yearly contracts; and at $20 per ton on any smaller quantity over that period. On spot and near by car loads, the quotation is $21 per ton.

TALC.—Conditions in the talc market are fairly satisfactory. Contract shipments are moving at a steady pace. Domestic talc is quoted at from $16 to $18 per ton, in bulk, at eastern mines; while imported talc is selling at from $23 to $30 per ton, on dock.

Market Quotations

Paper

(F. o. b. Mill)

Ledgers	6.50	@	—
Bonds	6.00	@	—
Index	6.00	@	—
Writings—			
Extra Superfine	6.50	@	—
Superfine	6.25	@	—
Tub sized	5.75	@	—
Engine sized	5.50	@	—
Book, Cased—			
S. & S. C.	5.35	@	5.75
S. & S. C. Litho.	5.60	@	6.00
M. F.	5.10	@	5.50
Coated and Enamel	5.90	@	6.55
Coated Litho	5.90	@	6.55
Tissues—Per Ream—			
White No. 1	.82½	@	.85
White No. 2	.67½	@	—
Anti-Tarnish M. G. only	1.00	@	—
Colored	.85	@	—
Kraft	.70	@	—
Manila	.67½	@	.70
Manila—			
No. 1 Jute	9.00	@	9.25
No. 2 Jute	7.75	@	8.50
No. 1 Wood	4.00	@	5.25
No. 2 Wood	3.50	@	4.00
Butchers	3.37½	@	—
Fibre Papers—			
No. 1 Fibre	4.25	@	5.50
No. 2 Fibre	4.00	@	4.75
Common Bogus	1.50	@	3.00
Screenings	2.00	@	3.00
Card Middles	4.00	@	5.00
Glassine—			
Bleached, basis 25 lbs., No. 1	.11	@	—
No. 2	.10	@	—
Bleached, basis 20 lbs.	.13	@	—

(Delivered New York)

News, per ton—			
Roll, contract	40.00	@	—
Rolls, spot	40.00	@	—
Sheets	45.00	@	—
Side Runs	25.00	@	—
Kraft—			
No. 1 Domestic	4.75	@	5.00
No. 2 Domestic	3.87½	@	—
Southern	3.87½	@	—
Boards—per ton—			
News	45.00	@	50.00
Chip	42.50	@	47.50
Srl. Mla. Ll. Chip	52.50	@	55.00
Jute Lined Chip	52.50	@	55.00
White Patent Coated	65.00	@	70.00
Binders Boards	68.00	@	72.00

Mechanical Pulp

(On Dock, Atlantic Ports)

No. 1 Imported—			
Moist	27.00	@	29.00
Dry	27.00	@	30.00

(F.o.b. Mill)

No. 1 Domestic and Canadian	24.00	@	29.00

Chemical Pulp

(On Dock, Atlantic, Gulf and West Coast Ports)

Bleached Sulphite (Domestic and Foreign)—			
Division 1	2.85	@	—*
Division 2	2.80	@	—*
Division 3	2.75	@	—*
Prime Qualities—			
Class 1. All Prime Easy Bleaching	2.25	@	—*
Other Than Easy Bleaching—			
Class 2. Higher Than Standard	2.20	@	—*
Class 3. Standard	2.15	@	—*
Class 4. Lower than Standard	2.10	@	—

(On Dock, Atlantic Ports)

Kraft No. 1	1.85	@	1.90
Kraft No. 2	1.60	@	1.70

(F.o.b. Pulp Mill)

Kraft Domestic, (Delivered)	1.60	@	2.75
Soda Bleached	2.50	@	—

*Add 60 Cents per short ton, dock charges, for Albany; $2.00 for Lake Ports East and $3.00 for Lake Ports West of Mackinac Straits.

Domestic Rags

New Rags

(Prices to Mill f. o. b. N. Y.)

Shirt Cuttings—			
New White, No. 1	6.50	@	7.00
Silesias No. 1	4.25	@	4.50
New Unbleached	6.75	@	7.25
New Soft Blacks	3.00	@	3.25
Blue Overall	4.00	@	4.25
Fancy	2.50	@	2.75
Washables	1.75	@	2.00
Mixed Khaki Cuttings	3.00	@	3.25
O. D. Khaki Cuttings	3.75	@	4.00
Men's Corduroy	1.50	@	1.75
New Mixed Blacks	2.50	@	2.75

Old Rags

White, No. 1—			
Repacked	3.00	@	3.50
Miscellaneous	2.75	@	3.25
White, No. 2—			
Repacked	1.75	@	2.25
Miscellaneous	1.50	@	1.75
Thirds and Blues—			
Repacked	1.50	@	1.75
Miscellaneous	1.25	@	1.50
Black Stockings	2.50	@	3.00
Roofing Rags—			
No. 1	1.15	@	1.30
No. 2	.85	@	.90
No. 3	.75	@	.80
No. 4	.70	@	.75
No. 5A	.65	@	.70

Foreign Rags

New Rags

New Dark Cuttings	1.60	@	1.70
New Mixed Cuttings	1.75	@	1.85
New Light Silesias	3.75	@	4.00
Light Flannelettes	3.75	@	4.00
Unbleached Cuttings	6.50	@	6.75
New White Cuttings	6.50	@	6.75
New Light Oxfords	3.25	@	3.50
New Light Prints	2.75	@	3.00

Old Rags

No. 1 White Linens	7.50	@	8.00
No. 2 White Linens	6.50	@	7.00
No. 3 White Linens	4.50	@	5.00
No. 4 White Linens	2.25	@	2.50
No. 1 White Cotton	4.25	@	4.75
No. 2 White Cotton	3.25	@	3.75
No. 3 White Cotton	2.50	@	2.75
No. 4 White Cotton	1.90	@	2.15
Extra Light Prints	2.00	@	2.25
Ord. Light Prints	1.75	@	1.85
Med. Light Prints	1.55	@	1.65
Dutch Blue Cottons	1.75	@	1.85
French Blue Linens	2.30	@	2.40
German Blue Linens	2.15	@	2.25
German Blue Cottons	1.70	@	1.80
Checks and Blues	1.30	@	1.40
Linsey Garments	1.50	@	1.75
Dark Cottons	1.15	@	1.30
Old Shopperies	1.00	@	1.10
New Shopperies	.90	@	1.00
French Blues	1.70	@	1.80

Old Rope and Bagging

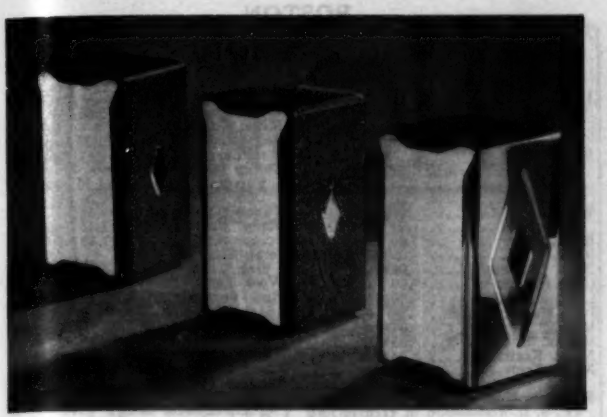
(Prices to Mill f. o. b. N. Y.)

Gunny No. 1—			
Foreign	1.50	@	1.60
Domestic	1.40	@	1.50
Wool Tares, light	1.20	@	1.30
Wool Tares, heavy	1.25	@	1.35
Bright Bagging	1.20	@	1.30
Manila Rope—			
Foreign	2.40	@	2.50
Domestic	2.50	@	2.75
Small Mixed Rope	1.10	@	1.35
New Burlap Cut	2.00	@	2.25
Hessian Jute Threads—			
Foreign	2.60	@	2.75
Domestic	2.80	@	3.00

Old Waste Papers

(F. o. b. New York)

Shavings—			
White Envelope Cuttings	2.70	@	2.80
Ordinary Hard White No. 1	2.35	@	2.45
Hard White No. 2	2.10	@	2.20
Soft White No. 1	1.95	@	2.05
Flat Stock—			
Stitchless	.90	@	1.00
Over issue Mag	.90	@	1.00
Solid Flat Book	.80	@	.90
Crumpled No. 1	.65	@	.75
Solid Book Ledger	1.50	@	1.65
Ledger Stock	1.05	@	1.15
New B. B. Chips	.30	@	.35
Manilas—			
New Env. Cut	1.70	@	1.80
New Cuttings	1.35	@	1.45
Print	Nominal		
Bogus Wrapper	.40	@	.50
Container	Nominal		
Old Kraft Mashine—			
Compressed bales	1.15	@	1.25
News—			
No. 1 White News	1.20	@	1.25
Strictly Overissue	.70	@	1.25
Strictly Folded	.40	@	.50
No. 1 Mixed Paper	.25	@	.30



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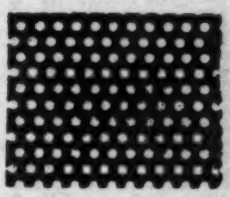

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Kalamazoo Michigan

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Twines
(F. o. b. Mill)

Cotton—			
B. C. 18 basis	.20	@	.22
No. 1	.20	@	.22
No. 2	.19	@	.20
No. 3	.17	@	.18
A. Italian, 18 basis	.36	@	.37
Finished Jute—			
Dark, 18 basis	.18	@	.20
Light, 18 basis	.20	@	.22
Jute Wrapping, 3-6 Ply—			
No. 1	.15½	@	.16½
No. 2	.15	@	.16
Tube Rope—			
4-ply and larger	.09¼	@	.09¼
Fine Tube Rope—			
4-ply	.11¼	@	.11¼
3-ply	.14¼	@	.14¼
2-ply	.14¼	@	.14¼
Paper Makers Twine	.08¼	@	.13¼
Box Twine, 2-3 ply	.14¼	@	.14¼
White Hemp	.13¼	@	.16¼
Java Sisal—			
No. 1 Basis	.11½	@	—
No. 2 Basis	.10½	@	—
New Zealand Sisal	.11½	@	—
Sisal Lath Yarn—			
No. 1	.13½	@	.15½
No. 2	.11½	@	.13½
Manila Twine	.24½	@	.29½

CHICAGO

Paper
(F. o. b. Mill)

Rag Bond	.12	@	.50
Water Marked Sulphite Bond	.06½	@	.15
Sulphite Bond	.05½	@	.15
Superfine Writing	.18	@	.24
No. 1 M. F. Book	.06½	@	.07¼
No. 2 M. F. Book	.05¾	@	.06¼
No. 1 S.&S.C. Book	.06¼	@	.07¼
No. 2 S.&S.C. Book	.05¼	@	.06½
Coated Book	.07	@	.12
Coated Label	.07	@	.08½
No. 1 Manila	.04¼	@	.05¼
No. 1 Fibre	.04¼	@	.05¼
No. 2 Manila	.04¼	@	.04¾
Butcher's Manila	.03¼	@	.03¼
No. 1 Kraft	4.75	@	5.00
Southern Kraft	3.88	@	4.25
No. 2 Kraft	3.88	@	4.25
Wood Tag Boards	.04¼	@	.07¼
Sulphite Screenings	.03	@	.04¼
Manila Tissue	.05¾	@	.07
White Tissue	.07	@	.09

(Delivered Central Territory)

News, per ton—			
Rolls, contract	41.00	@	—
Sheets, open	46.00	@	51.00
Boards, per ton—			
Plain Chip	46.50	@	—
Solid News	50.00	@	—
Manila Lined Chip	55.00	@	—
Patent coated	65.00	@	—
Container Lined—			
85 Test, per 1000 sq. ft.			1.70
100 Test, per 1000 sq. ft.			1.85

Old Papers
(F. o. b. Chicago)

Shavings—			
No. 1 White Envelope cuttings	1.70	@	2.00
No. 1 Hard White	1.40	@	1.65
No. 1 Soft White	1.25	@	1.50
Ledger & Writings	.70	@	.80
Solid Books	.60	@	.70
Blanks	1.00	@	1.05
Krafts	.80	@	.90
New Kraft Cuts	1.20	@	1.30
Manila Env. Cuts	1.25	@	1.30
Ex. No. 1 Manila	.90	@	1.00
Print Manila	.50	@	.55
Overissue News	.60	@	.70
Old Newspapers—			
No. 1	.50	@	.55
Mixed Papers—			
No. 1	.30	@	.35
Roofing Stocks—			
No. 1	30.00	@	—
No. 2	28.00	@	—

PHILADELPHIA

Paper
(F. o. b. Mill)

Bonds	.04	@	.40
Ledgers	.06	@	.40
Writings—			
Superfine	.10	@	.18
Extra Fine	.15	@	.26
Fine	.15	@	.26
Fine, No. 2	.10	@	.25
Fine No. 3	.05½	@	.18
Book, M. F.	.04¼	@	.07
Book, S. S. & C.	.05	@	.07½
Book, Coated	.06	@	.16
Coated Lithograph	.06	@	.11
Label	.07	@	.11
No. 1 Jute Manila	.06	@	.10
Manila Sul., No. 1	.03	@	.06
Manila No. 2	.03	@	.05
No. 1 Kraft	.05¼	@	.06½
No. 2 Kraft	.03¼	@	.05
Southern Kraft	2.75	@	4.00
Common Bogus	.03	@	.04½

(Delivered Philadelphia)

News Print Rolls	46.00	@	55.00
Straw Board	40.00	@	45.00
News Board	50.00	@	—
Chip Board	45.00	@	—
Wood Pulp Board	70.00	@	85.00
Binder Boards—			
No. 1, per ton	75.00	@	80.00
No. 2, per ton	70.00	@	75.00
Carload lots	65.00	@	70.00
Tarred Felts—			
Regular	52.25	@	54.25
Slaters (per roll)	.84	@	.94
Best Tarred, 1-ply (per roll)	1.95	@	2.10
Best Tarred, 2-ply (per roll)	1.50	@	1.60
Best Tarred, 3-ply	2.00	@	2.25

Domestic Rags (New)
(Price to Mill, f. o. b. Phila.)

Shirt Cuttings—			
New White, No. 1	.03½	@	.04
New White, No. 2	.02½	@	.04
Light Silesias	.02½	@	.03
Silesias, No. 1	.03	@	.03½
Black Silesias, soft	.02½	@	.03
New Unbleached	.05	@	.05½
Washable, No. 1	.01½	@	.02
Blue Overall	.03½	@	.04
Cottons—According to grades—			
Washable, No. 2	.02½	@	.03
New Blue	.01½	@	.02
Fancy	.01½	@	.03
New Black Soft	.02	@	.04
New Light Seconds	.01½	@	.02
New Dark Seconds	1.50	@	1.75
Khaki Cuttings—			
No. 1 O.D.	.03	@	.04
No. 2 Mixed	.03	@	.04
Corduroy	.02	@	.03
New Canvas	.03½	@	.04½
New Black Mixed	.02½	@	.03½

Domestic Rags (Old)

White No. 1—			
Repacked	2.50	@	3.50
Miscellaneous	1.75	@	2.25
M. G.	3.00	@	3.75
Thirds and Blues—			
Miscellaneous	1.00	@	1.50
Repacked	1.50	@	2.00
Black Stockings (Export)	2.00	@	3.50
Roofing Stock—			
Foreign No. 1	.50	@	.75
Repacked	.70	@	.85

Bagging
(F. o. b. Phila.)

Gunny, No. 1—			
Foreign	1.25	@	1.30
Domestic	1.50	@	1.75
Manila Rope	2.00	@	2.25
Sisal Rope	1.25	@	1.50
Mixed Rope	1.00	@	1.10
Scrap Burlaps—			
No. 1	1.25	@	1.30
No. 2	.80	@	1.00
Wool Tares, heavy	2.75	@	—
Mixed Strings	1.15	@	1.25
No. 1 New Light Burlap	2.25	@	2.34
New Burlap Cuttings	2.00	@	2.25

Old Papers
(F. o. b. Phila.)

Shavings—			
No. 1 Hard White	2.25	@	2.30
No. 2 Hard White	2.00	@	2.10
No. 1 Soft White	2.05	@	2.10
No. 2 Soft White	1.50	@	1.60
No. 1 Mixed	.95	@	1.00
No. 2 Mixed	.75	@	.80
Solid Ledger Stock	1.50	@	1.60
Writing Paper	1.25	@	1.50
No. 1 Books, heavy	.90	@	1.00
No. 2 Books, light	.70	@	.80
No. 1 New Manila	1.20	@	1.50
No. 1 Old Manila	.85	@	.90
Print Manila	.75	@	.80
Container Manila	.65	@	.70
Old Kraft	1.00	@	1.10
Common Paper	.35	@	.40
No. 1 Mixed Paper	.40	@	.45
Straw Board Chip	.40	@	.45
Binders Board Chip	.40	@	.45
Corrugated Board	.60	@	70
Overissue News	.60	@	65
Old Newspapers	.40	@	50

BOSTON

Paper
(F. o. b. Mill)

Ledgers—			
Sulphite	.06	@	.12½
Rag Content	.12	@	.30
All Rag	.36	@	.52½
Bonds—			
Sulphite	.05½	@	.11
Rag Content	.12	@	.40
All Rag	.36	@	.65
Writings	.06½	@	.20
Superfines	.11	@	.31
Book, Super	.06	@	.09
Book, M. F.	.05½	@	.08½
Book, Coated	.08½	@	.18
Coated Litho	.09	@	.12
Label	.09½	@	.15
Jute Manila No. 1	.11	@	.13
Manila, Sul. No. 1	.04¾	@	.06½
Manila, Sul. No. 2	.03¾	@	.04½
No. 1 Kraft	.04¾	@	.05
No. 2 Kraft	.03½	@	.04½

(F. o. b. Boston)

Southern Kraft	.03½	@	.04½

(F. o. b. destination in carload lots, f. o. b. mill in less than carload lots.)

Common Bogus	.02	@	.02¼

(Delivered New England points)

News Print, rolls	44.50	@	—
Straw Board, rolls	.009	@	35.00
Straw Board in Sheets, basis 35s to 70s	—	@	40.00
Filled News Board	45.00	@	50.00
Chip Board	42.50	@	47.00
Chip Board (Creasing)	45.00	@	—
Single Manila Lined Chip	52.50	@	62.50
Single White, Patent Coated News Board—Bender	62.50	@	72.50
Wood Pulp Board	70.00	@	75.00
Binder Boards	62.00	@	75.00

Old Papers
(F. o. b. Boston)

Shavings—			
No. 1 Hard White	2.40	@	—
No. 1 Soft White	1.75	@	2.00
No. 2 Mixed	.75	@	.80
Solid Ledger Books	1.40	@	1.50
Overissue Ledger Stock	1.15	@	1.30
Mixed Ledgers	1.00	@	1.10
No. 1 Books, heavy	.85	@	.95
No. 1 Books, light	.65	@	.75
Crumpled Stitchless Book Stock	.50	@	.60
Manila Env. Cuttings	1.25	@	1.30
No. 1 Old Manila	.95	@	1.05
White Blank News	1.05	@	1.10
No. 1 Kraft	1.10	@	1.15
Manila	.75	@	.80
No. 1 Mixed Papers	.20	@	.25
Print Manila	.40	@	.45
Overissue News	.55	@	.60
Old Newspapers	.35	@	.40
Box Board Chips	.32½	@	.35
Corrugated Boxes	.35	@	40
Screening Wrappers	.60	@	.70

Bagging
(F. o. b. Boston)

Manila Rope—			
Foreign	—	@	2.25
Domestic	—	@	2.50
Transmission Rope	1.60	@	—
Mixed Strings	—	@	.60
Jute Rope	1.35	@	—
Jute Carpet Threads	.65	@	.70
Gunny No. 1—			
Foreign	1.50	@	—
Domestic	1.20	@	1.30
Bleachery Burlap	3.00	@	3.25
Scrap Burlap	1.15	@	—
Scrap Sisal	1.10	@	1.20
Scrap Sisal for shredding	1.25	@	1.35
Wool Tares, heavy	—	@	1.25
New Burlap Cuttings	1.35	@	1.60
Australian Wool Pouches	2.25	@	2.50
Heavy Baling Bagging	1.40	@	1.50
Paper Mill Bagging	.90	@	1.10
Bagging No. 2	.40	@	.50

Domestic Rags (New)
(F. o. b. Boston)

Shirt Cuttings—			
New Light Prints	.02	@	.02¼
New White No. 1	.06½	@	—
New White No. 2	.04½	@	.05
Silesias No. 1	.04	@	—
New Black Silesias	.02½	@	.03
New Unbleached	.07	@	.07¼
Blue Cheviot	—	@	4.65
Fancy	—	@	.02½
Washable	.02¼	@	—
Cottons—According to grades—			
Blue Overalls	—	@	.03¼
New Black, soft	.04	@	.04½
Khaki Cuttings	.03	@	.03¼
O. D. Khaki	.03	@	.03¼
Corduroy	.01¾	@	.02
New Canvas	—	@	.05
B.V.D. Cuttings	—	@	.06¼

Domestic Rags (Old)
(F. o. b. Boston)

Canvas	.04½	@	—
White No. 1—			
Repacked	3.00	@	3.50
Miscellaneous	2.00	@	2.25
White No. 2—			
Repacked	2.00	@	2.25
Miscellaneous	2.00	@	2.75
Twos and Blues	1.25	@	1.50
Thirds and Blues			
Repacked	1.10	@	1.25
Miscellaneous	.85	@	.90
Black Stockings	2.25	@	2.50
Roofing Stock			
No. 1	1.00	@	1.05
No. 2	.75	@	.80
No. 3	.65	@	.70

Foreign Rags
(F. o. b. Boston)

Dark Cottons	1.00	@	1.10
New White Shirt Cuttings	5.50	@	6.00
Dutch Blues	2.00	@	2.50
New Checks & Blues	2.50	@	3.00
Old Fustians	1.55	@	1.60
Old Linsey Garments	1.40	@	1.50

TORONTO

Paper
(F. o. b. Mill)

Bond—			
No. 1 Sulphite	.10¼	@	—
No. 2 Sulphite	.08½	@	—
No. 1 Colored	.10¼	@	—
No. 2 Colored	.09	@	.10
Ledgers (sulphite)			
Ledgers, No. 1	.34½	@	—
Ledgers, No. 2	.25½	@	—
Writing	.09	@	.09½
Book—			
No. 1 M. F. (Carloads)	6.20	@	—
No. 3 M. F. (Carloads)	5.70	@	—
No. 4 M. F. (carloads)	4.75	@	—
No. 1 S. C. (carloads)	6.65	@	—
No. 3 S. C. (carloads)	6.20	@	—
No. 4 S. C. (carloads)	5.20	@	—
No. 1 Coated and Litho	12.00	@	—
No. 2 Coated and Litho	10.50	@	—
No. 3 Coated and Litho	9.50	@	—
Coated tinted	14.00	@	—
Wrapping—			
Rag Brown	4.25	@	—
White Wrap	2.22½	@	—
"B" Manila	4.75	@	—
No. 1 Manila	5.25	@	—
Fiber	5.25	@	—
Kraft, M. F.	5.75	@	—
Kraft No. 2	5.25	@	—

(F.O.B. Cars Toronto)

News, per ton—			
Rolls (contract)	45.50	@	—
Sheets	50.50	@	—

Pulp
(F. o. b. Mill)

Ground Wood	18.00	@	20.00
Sulphite easy bleaching	40.00	@	—
Sulphite, news grade	38.00	@	—
Sulphite, bleached	50.00	@	55.00
Sulphate	50.00	@	—

Old Waste Paper
(In carload lots, f. o. b. Toronto)

Shavings—			
White Env. Cut	2.00	@	2.10
Soft White	1.60	@	1.90
White Blk. News	1.25	@	1.50
Book and Ledger—			
Flat Magazine and Book Stock (old)	.90	@	1.00
Light and Crumpled Book Stock	.80	@	.90
Ledgers and Writings	1.00	@	1.05
Manilas—			
New Manila Cut	1.25	@	1.50
Printed Manilas	.70	@	—
Kraft	1.25	@	1.50
News and Scrap—			
Strictly Overissue	1.00	@	—
Strictly Folded	.70	@	—
No. 1 Mixed Paper	.60	@	—

Domestic Rags
(Price to mills, f. o. b. Toronto)

No. 1 White Shirt Cuttings	.05¼	@	.05¼
Fancy Shirt Cuttings	.02¼	@	.02¼

BENNETT

TRADE MARK

ROSIN-WAX SIZE

CURLING

Curling of paper, or warping of board, is generally attributed to uneven stresses between the fibres caused by changes in moisture content, and is definitely related to the rate at which fibres absorb or lose moisture.

Bennett Rosin-Wax Sizes materially retard the speed at which papers absorb and lose moisture under varying atmospheric conditions and, for this reason, have eliminated the troubles encountered from curling and warping in several mills.

Wax, unlike rosin, also acts as a lubricant allowing a certain amount of slip between the fibres, which reduces internal stress. Papers and boards sized with Bennett Rosin-Wax Sizes will lie flat and are not affected as much by changes in humidity as rosin sized papers.

(This is one of a series of advertisements dealing with the profitable application of Bennett Rosin-Wax Sizes. Additional information regarding the subjects discussed will be furnished on request.)

BENNETT INCORPORATED

CAMBRIDGE, MASS., U. S. A.

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(Pure TITANIUM Dioxide)

REFRACTIVE INDEX—2.52

The whitest and most opaque of any white pigment that has as yet been discovered.

It is being used both as a filler and in coating.

Our laboratory will be glad to assist you in formulating methods of application to insure maximum opacity in your paper.

"McNAMEE" CLAY

Air washed, Pulverized, or Crude.

We manufacture all grades suitable for both filling and coating.

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230 Park Avenue
New York